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BLISTER RUST NEWS



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U. S. DEPARTMENT OF AGRICULTURE

Office of Blister Rust Control

The Blister Rust Control Agent.

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UNITED STATES DEPARTMENT OF AGRICULTURE
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THE BLISTER RUST NEWS

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and Cooperating States.
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NEW YORK NUMBER

FEBRUARY 15, 1924.

"Hello Agent!"

"Say, clamp onto one of those Ribes picks and give me a lift with this one; it isn't a big one but it pulls hard. Its been a tough job trying to pull Blister Rust news from some of your districts. I know you're working overtime putting that new poster scheme of yours across, but when did you patent the idea, or get the exclusive right to use it? Play fair now; write it up and send it in; there's fifty other districts waiting for it. That was a corking way you landed old Si Hardnut - remember that time you and me was up there and he threatened to loosen his guns on us? - I heard you sold him, but no particulars. Wish you would tell us how it all happened. There's an army of those fellows up in New York State and Major Woodward up in Warren County wants some of your ammunition.

"Gee! Your Ford runs slick! What have you done to it lately besides wash off that three months' layer of mud? Most of us steer the same brand; you might give us a tip on your secret.

"But don't let me get too far along that track, as my Lizzie's got a bad knock and I'll ignore Webster in telling you about it. What I was driving at is this. Did you ever get any ideas, even wild ones, about ways and means of improving our work, and if so, what do you do with them? Send 'em in; we've got a special taming process for the wild ones, and time to consider all of them. First thing you know, we'll have a real Blister Rust News Letter, written to help, inspire and instruct each other in a common work.

"This month with the New York Number, we (that's you and me and all of us) are starting a series of News Letters fattened with an additional amount of dope each month from a different state. Next month will come the Massachusetts number, then the Maine number, then will follow those of Vermont, New Hampshire, Connecticut, and Rhode Island. Let's have a better number each month. This state number idea does not exclude any good material from other than the favored state, in fact, the more dope from the other states, the better will copy from the one have to be, in order to be printed. So don't wait your turn; there's room for you all each month. Material that will be of interest or of assistance to other Agents is the stuff. 'News' can be made more valuable by going into detail as to the purpose, methods and results.

"What do you think, Agent, of some of the other permanent features? There is that exhibit plan section, should that be enlarged? 'On The Firing Line' and the Editorial Pages are also new ones. Didya ever write an editorial? Lots of fun - try it - lets look them over.

"By George! Here I've gone and been talking just to you, Agent, and there stands a row of six foot (in one way or another) state leaders, specialists, and pathologists, all looking on enviously. Lots of room in line for all you boys; stack your lunches and coats right there all of you, and get that line straight. All right, let's go; the guide is right!"

Ribee Bill

SOME THOUGHTS AND OBSERVATIONS ON THE GENERAL PUBLICITY WORK IN BLISTER RUST CONTROL IN NEW YORK STATE.

General and intensive educational work in blister rust control are so closely interlinked that it is a rather difficult proposition to determine the relative merits of each. Results from a general educational program can only be estimated, yet efforts along this line are oftentimes apparent as they result in personal interviews which are as a rule productive of tangible results in the nature of co-operation. This, of course, is the prime object of all educational work whether intensive or extensive, -to secure cooperation that results in protected pine.

Meetings such as Farm Bureau Community Gatherings, Schools, Y.M.C.A's., Boy Scouts, Rotary Clubs, Fish and Game Clubs and various civic organizations are frequently productive of results which may be measured in the number of requests for personal interviews. Certainly they should result in increased interest in the work and a corresponding increase in moral support which may sooner or later crystallize in the form of requests for inspection. As blister rust control work is a part of the extension program in New York and the New England States, and, as those deriving benefit from the Farm Bureau Organization are the owners of most of the pine lands in these various states, Farm Bureau Meetings are usually productive of results much sooner than meetings of other types. Yet it has been quite conclusively proved that the agent should not neglect opportunities to talk on blister rust whenever and wherever possible, even to those not vitally concerned. In New York State we have found that the use of moving picture films and lantern slides at these meetings greatly increases the interest manifested, especially in the rural districts, but this phase of the work should not be overdone by too much duplication of effort.

In contrast to the field of the county agricultural agent, that of the blister rust agent is somewhat limited so that it is oftentimes necessary for him to introduce associated topics of interest from a forestry standpoint in order that interest in blister rust work shall not be lessened by too much duplication.

Another form of general publicity is that of newspaper articles and local items. Results in this case can only be estimated, yet it must be remembered that this form of publicity tends to stimulate and maintain interest in the work. Terse items of local interest interspersed occasionally with articles from the offices of the state leaders or from Washington fulfill this part of the general educational program. "Write-ups" of the various meetings which the agent addresses are very good publicity - frequently productive of definite results and at the same time tend to improve the morale of the agent himself.

It is not easy to over-emphasize the value of exhibits for publicity work. An exhibit in the window of a progressive store in towns and cities arrests the attention of many people who are more or less vitally interested. Results of a roadside demonstration depend to a great extent on the completeness and accessibility of the exhibit. In New York State we consider roadside demonstrations one of our chief avenues of publicity and are productive of immeasurable results in disseminating knowledge of the disease.

S. H. Fogg, Warren Co., N. Y.

MY JOB

The blister rust agent has a distinct individuality, a definite position in the every-day life of the nation. By virtue of his job he loses his status as an ordinary private citizen; he takes his place among those who are giving their energies for the public welfare. True the blister rust agent's work is concentrated in but a small unit of area, a district comprising one or more counties. He is limited in his activities to that particular area. But he must not forget that his particular district is a part of that larger organization heading-up in his state; that his state is only one of a group of states in which the problems of blister rust control are, in general, the same; that we, as agents, are a part of a national organization engaged in a work for the welfare of the nation as a whole.

The blister rust program is a difficult one. We are given eight years in which to accomplish first eradication in our white pine stands. Two of these eight years have already passed, and if we are to complete our control campaign in the remaining six years, some hustling has to be done. We must have closer cooperation between all the agents, between all parts of the blister rust family. When an agent discovers that a certain method of procedure works well in his district, let him send on the idea to the state office, or send a card around to the other agents. We cannot have a general conference very often; we can hand around hints which may prove helpful to the other agents. The News Letter is a good medium for the exchange of ideas; let us use it more as such.

In conclusion, we must not forget that we are responsible for completing a definite job, and it is up to us to plan to put over our share.

H. H. Knowles, Fulton Co., N. Y.

END OF FIRST ERADICATION IN SIGHT IN
RHODE ISLAND.

"We have just completed one of the most satisfactory eradication seasons. Plans are under way to make 1924 the banner year. It is possible with reasonably favored conditions to finish eradication on the best pine stands in this state in two more years, three years at the most. Interviewing of the land-owners for the 1924 season has commenced, and the indications show that to have another such year as last will require an early start. Two more scouts will be employed in the northern towns of the state, in addition to the four regularly employed.

Some new infections on pine in the town of Burrillville have lately been found. Mr. Hodgkins found one infection in a pine grove in that town the first part of last year, all of these probably having a common source in nearby black currants.

Data on a Blister-Rust Forestry-demonstration plot have been collected. Concrete facts concerning rate of growth of white pine in Rhode Island have never been developed before as to be available for application to native pine woodlots. Very few of the white pine woodlots are putting on more than 400 board feet per year, showing the need of proper thinnings and care."

O. A. Anderson, Providence, R. I.

BLISTER RUST IN THE PUBLIC SCHOOLS

In my district, Saratoga County, New York, a good many of the outlying sections consist largely of sand land farms and the inhabitants are rather slow to take up new ideas or teachings.

For this reason it seemed advisable to emphasize blister rust publicity in the district schools because anything coming through these schools is more apt to be understood as reliable by the parents.

The county is divided into four school supervisory districts. The supervisor of each school district recommends text books and materials, and in general keeps tab on the individual teachers in all the rural schools within his jurisdiction. These supervisors visit all their schools and know the locations. For this reason I have interviewed the supervisors in the three districts in which I have already worked. By getting the supervisor's permission to visit schools and having him mark the location of these on the U.S.G.S. maps, official sanction is obtained and unnecessary traveling is avoided in reaching out-of-the-way schools.

For my work I carry a small living pine tree with the early stages of blister rust showing on it, a preserved specimen in the aecial stage, Ribes mounts of currant and gooseberry stems and leaves with blister rust showing on them, and "Save the Pine" posters and "Jack Frost" folders.

Upon entering a school I hang up a "Save the Pine" poster and then proceed to give the children an outline of the value of white pine, its rapidity of growth, method of identification, etc. Then as simply as I can I explain blister rust and how it can be controlled. In conclusion, the function of the blister rust agent is explained and the "Jack Frost" folders are distributed to the oldest members of those families who own pine land.

To tie up the work I sign the school register with my name and address, explaining to the children as I do so that their parents, if interested, can reach me through the teacher.

So far I have obtained a few direct leads from the teachers in charge. Later I expect the work will serve as my introduction when I take up intensive work in a new area. At least more people will know about what I am doing. Also, through the pupils, I am very apt to get data on scattered spot infections.

Pierre K. Miller, Saratoga Co., N. Y.

In Maine each County Agent has sent a report of work done in 1923 to officials of towns appropriating blister rust funds. Such reports are very acceptable to the officials, and in most cases will be included word for word in the annual town report. This is another good method of advertising.

Eradication figures for Maine during 1923 show that 336,452 acres were eradicated at a cost of \$19,320.03.

1,209,280 wild Ribes and 12,095 cultivated Ribes were destroyed.

This gave a cost of around .06 per acre which includes scouting costs.

Costs to individuals average .49 per acre.

AROUSING INTEREST AND CREATING DESIRE

are major steps in successful salesmanship, in successful teaching, and in successful Blister Rust Control work. Tried and proven methods are innumerable, yet new ones are being developed every day.

Which ones can we use in our work?

The man who can see the merit in the other fellow's idea, and who puts it to work for himself, leads the rest because he is using two heads instead of one.

FISH AND LUMBER

Fish and white pine formed the keystone of early New England commerce and wealth. In 1641, New England exported 300,000 dried fish to the West Indies and to the Catholic countries of Europe. During that year eleven vessels sailed to the West Indies loaded with white pine lumber and pipe-staves, bringing back sugar, indigo and other tropical products.

(News Letter, N. Y. State College of Forestry, Syracuse)

Mr. George F. Richardson, New Hampshire Agent who received his appointment in November, 1923, is carrying on the work in good fashion. As witness of his ability and interest in the work, we have at hand a well written article in a New Hampshire paper, "Hillsborough County Has Made a Good Start in White Pine Blister Rust Work." He has summarized the work in the county in tabular form, listing the towns, acres worked, number of Ribes removed, and average cost per acre, so that the citizen in each town can tell exactly where their town stands.

Mr. Richardson presents the necessity for reexamination of land for Ribes in a straight-forward manner. Quoting from the article mentioned:-

Towns For The First Time

"The following towns and cities have been covered for the first time, viz: Peterborough, Litchfield, Milford, Merrimack, Wilton, Nashua, and Manchester. Everyone will recognize the fact that it is practically impossible to locate and destroy every currant and gooseberry bush the first time over. Therefore, it will be necessary to make a future examination of the towns and cities above mentioned so as to locate the few remaining bushes or such others as have sprung up from seed. The cost of such work will be much less than the original."

BLISTER RUST CONTROL AND REFORESTATION
GO HAND IN HAND IN THIS DISTRICT

In cooperation with the Farm Bureau in Columbia County, New York, 15,000 white pine seedlings were planted in six demonstration areas. One particularly interesting demonstration was the Hudson City Reservoir which the school children and boy scouts helped plant. Men from the Board of Public Works did the eradication under state supervision. It is expected that ten or fifteen thousand white pines will be planted in demonstration areas this year, for which arrangements have already been partly made.

The people in general are very much interested in Blister Rust control work and reforesting with white pine. Dutchess county planted in 1923, 89,000; Ulster, 75,000; Greene, 218,000; Columbia, 104,200. In the Hudson River District or District No. 1, which is Columbia, Dutchess, Ulster and Greene Counties, about 1800 acres were cleared of Ribes in 1923. This would have been more only for not being able to get help. Have about 1500 acres promised for 1924 eradication at present. All eradication in this district up to date has been done under state supervision. This seems to be the only satisfactory basis.

N. H. Harpp, Columbia Co., N. Y.

NOTEWORTHY IMPROVEMENTS IN CONTROL WORK IN VERMONT.

The work in Vermont has been summarized by Mr. Riley, and appears in the following tabloid form:

Number of Private Cooperators		Acreage Eradicated	
1920	29	1920	4,500
1921	31	1921	6,317
1922	125	1922	13,500
1923	220	1923	25,000

Cost per Acre	
1920	72¢
1921	55¢
1922	46¢
1923	35¢

BLISTER RUST CONTROL AGENTS MEET WITH AGRICULTURAL AGENTS

A feature of the meeting in December of the Extension workers of New York State, held at Ithaca, was a get together of Blister Rust Control Agents and County Agricultural Agents from the white pine districts. The gathering took the form of a round-table discussion resulting in an exchange of plans, views, and suggestions between the men. We have much to learn about Extension methods and such informal meetings are exceedingly valuable.

THE BLISTER RUST AGENT'S SERVICE.

Is the blister rust agent rendering a valuable service; is it recognized as such by the public; and does he himself feel the importance of his work? An agent's opinion of his work is largely governed by the attitude and comments of the public with which he is immediately associated and a few knocks in the ear occasionally reduces his pep and dims his enthusiasm for the work. In technical and scientific work the public is always ready to be a judge regardless of its utter incompetency to do so. So it is not safe for an agent to feel disheartened or disgusted if he hears his work referred to as "soft job", "What does all that amount to" etc.

Our chief forester, in his 1923 report to Secretary Wallace, in speaking of forest officers says, "Their performance as technical men can less readily be judged by the public, but it is not less important to the public, for on it depend the permanence and maximum future reproductiveness of the forest resources." I think this statement sums up pretty well the position of a blister rust agent. The agent can improve the attitude toward his work by the proper publicity, as pointed out by Mr. Greeley in another statement, "The duties of forest officers as technical men include also leadership in informing the public concerning the purposes and methods of the work, -- in order that the public may be able to judge more intelligently." I wonder if a little publicity as to the duties of an agent, what he is doing from time to time, what he has accomplished and what he expects to accomplish, would not help his work along and aid in keeping his morale higher.

A blister rust agent works for the future. Work done for the future does not usually receive the appreciation and merit which it deserves at the time in which it is performed. Our job is not routine; we do not have a daily set of tasks to perform. It is therefore more difficult for the public to understand the importance of the work that is ours to do.

A great service is being rendered to the future welfare of this country by the blister rust agents and their co-workers. The greatness of any country depends upon its natural resources and we are helping this country hold its position as the greatest nation in the world by helping to preserve and augment our natural resources. We go about preaching the great future value of white pine and what a good investment reforestation and protection from blister rust is. Do you believe what you preach? Then why not reap some of the benefits of the golden harvest by buying a small area of cheap timber land and reforesting it. It would increase faith in the work and be an object lesson for others. I intend to make such an investment and reforest the land with white pine, because I believe the financial returns will be greater than our present fondest hopes lead us to expect. Sounds rather flowery, doesn't it, but what do you think about it?

J. D. Kennedy, Washington Co., N. Y.

A notice from Robert W. Chambers, the well-known novelist, that he is planning to continue reforesting this spring has just been received by H. H. Knowles, Fulton Co., N. Y. He owns a large estate at Broadalbin which was cleared of currants and gooseberries in 1922. Control of the white pine weevil is being attempted there now. Mr. Chambers is an enthusiastic booster of the Forestry movement. Have you read his article, "When Forests Go - - "?

REFORESTATION IN NEW YORK ON THE INCREASE.

Some idea of the rapid growth of the reforesting movement may be gained from the fact that twenty years ago the total number of forest trees planted in New York state was 58,000, all on state land. In 1923 the distribution of trees from the state nurseries reached a total of 8,646,707 trees, which was more than double the output of 1922 when 4,308,423 trees were planted. From the time the first plantation was made on state land in 1901, to the close of the fall planting season in 1923, there have been planted in New York State 76,662,675 forest trees from the state nurseries, and more than half of these have been planted in the last eight years.

The most notable feature of this year's reforestation work is the number and size of the plantations made by farmers and other private landowners. These plantations absorbed a total of 3,150,952 trees which shows that interest in the replacement of our rapidly dwindling forests is widespread and is not confined to any class or locality. More trees were planted by individual land-owners than by municipalities, industrial concerns or by the state. Mr. Pettis states about 41% of the output of the State Nurseries today is white pine.

(From Press Notes of the New York Conservation Commission)

WORK IN WINDHAM COUNTY, VT.

Mr. S. V. Holden, in a January news item in the Brattleboro paper reports the work of the year. 58 pine owners cooperated with the state and federal governments this past year in Ribes eradication. 32,383 wild bushes and 111 cultivated bushes were removed from a little over 7,000 acres. The work in this county is largely in the towns of Townshend, Newfane and Brookline and along the Connecticut River valley, as white pine does not grow to an appreciable extent in the western part of the county.

THIS EXHIBIT PAID.

A worth-while exhibit held recently in northern Worcester County, Mass., by Agent R. W. Merrick, interested a large number of persons. The occasion was the Sixth Annual Meeting of the Mass. Agricultural Organization, cooperating with the Department of Agriculture, held at Worcester for 4 days. The exhibit consisted of a large map of Worcester County showing the towns where infection had been found, large diseased pine, posters, other maps and Ribes specimens and was seen by 5,770 people. The disease was explained to 590 persons, and a good list of interested owners was secured.

(This is the type of meeting where good blister rust control exhibits have a far-reaching effect; people have leisure to investigate and have come together for exchange of ideas, rather than for entertainment. Such meetings bring out the agricultural leaders of the state. Editor)

BLISTER RUST ROADSIDE DEMONSTRATION

The roadside demonstration idea has been emphasized in Warren County. Nine of the eleven towns in the county have such infection areas marked with many tree tags, posters and signs, and located on traveled roads. In all there are over 25 such roadside demonstrations working every day throughout the year to help awaken the pine owners of the county.

The extent of these field exhibits varies widely. Some consist of a few trees, conspicuously located and badly cankered, properly tagged. The most extensive, located along the state road between Pottersville and Loon Lake occupies several hundred feet of roadside, where pines on and adjacent to the right-of-way are badly infected. Four sign boards, 2-1/2 x 3 feet in size, a twenty foot streamer and numerous smaller posters and cards are effectively placed on this area. The many smaller yellow and white tags attached to diseased trees and gooseberries make this exhibit very conspicuous.

Although we have no definite way of knowing just how many people are interested by means of these roadside demonstrations, we have had many inquiries about blister rust that traced back to them. Like other general publicity work, the indirect influence of these exhibits is the important result, rather than the direct inquiries that come because of them.

E. G. Woodward, Warren Co., N. Y.

A GOOD LETTER PAYS.

James W. Sewall, well-known Forest Engineer, and an owner of white pine, was 100 miles away. "Jack" Frost, State Leader of Maine, chose to reach him with the Blister Rust story by letter, which undoubtedly was a well-planned "salesman." The reply speaks for itself.

Old Town, Maine,
January 25, 1924.

Mr. W. O. Frost,
Forest Commissioner's Office,
Augusta, Maine.

Dear Mr. Frost:

I have your letter of the 21st inst. We have approximately 500 acres to be scouted and Ribes eradicated where necessary. I will count on having a man from you to take charge of the work, I furnishing what other men are necessary. Please tell me as soon as possible about what date your man will be here so that I can arrange to be here myself and show him the lines, etc.

The work is necessary because we found blister rust infection in the area during this last year.

Yours very truly,

(Signed) JAMES W. SEWALL.

WISCONSIN REPORTS
PROGRESS OF WORK FOR PAST YEAR.

"During the past season crew work was confined chiefly in completing Ribes eradication in pine stands which previously were not in immediate danger. Cooperation in some cases had been arranged for as much as three years previous, while in a few instances small woodlots were freed of Ribes where farmers agreed to cooperate shortly before the crew began work. A total of 1,347 acres were eradicated by the State crew, resulting in a Ribes free area of 3,347 acres. In addition, the Federal crew in connection with experimental work at Eau Galle, under Wm. C. Thompson, eradicated an area of 559 acres. Because of the fact that the eradication areas were so widely scattered, and the fact that several unavoidable accidents to members of the crew occurred during the season, the work was at times interrupted. Nevertheless, the general progress throughout the season was satisfactory, and cost per acre eradicated was not excessive.

"During the latter part of the season some scouting was done over a large area in the Ashland region, largely for the purpose of locating pine areas. No extensive areas with dense stands of white pine were found, and only four stands ranging up to 150 acres were located. On the other hand, excepting in the sandy regions there are tens of thousands of acres containing from one to twenty or more white pines per acre among the forests containing much scattered Norway pine, poplar, and other hardwood. Nearly all of this forest area is second growth after being burned over 25 years ago or later. Excepting on the sandy lands, Ribes may be found in all of this region, although comparatively few in most places. No blister rust infections have as yet been found in this region."

H. J. Ninman, Madison, Wis.

(Given good fire protection this northwestern portion of Wisconsin should again ultimately be a large white pine producing region. Editor.)

BLISTER RUST CONDITIONS IN MINNESOTA.

The annual report for Minnesota has just been received. According to Mr. Roberts, State Agent, no new infections were found in places where blister rust had been previously discovered, namely, Rush Lake, Goose Creek, Maple Ridge, Dalbo, Dry Creek, Franconia, Marine Mills and Afton. Old pine infections, however, were found at Rush Lake, Marine Mills and at Afton.

Mr. Roberts has now left the work of blister rust control in Minnesota to renew his work in the Forestry Department, devoting his time largely to Forest Educational work. His interest and knowledge of blister rust control work in Massachusetts, New Hampshire, and Wisconsin will be of value to him in his new work. He has the best wishes of the Office for continued success.

George Everest, a farmer in Montgomery County, New York, is practicing woodlot management. His stand is mixed pine and hardwoods. He is removing inferior hardwoods, gradually opening stands to favor more rapid growth and reproduction of pine, hemlock, red oak, and basswood. He also plans to reforest 15-20 acres to white pine and spruce. Ribes eradication is a necessary part of woodlot management wherever white pine forms an essential part of the stand.

THE WORK FOR THE COW AND THE HOG MAY HELP SAVE THE
WHITE PINE.

Under the pressure of our work we often get into the state of mind that our particular job is unique, and that nothing like it has ever been done before. The campaign for the control of white pine blister-rust is no exception, and to those who look around various similar examples will be seen. Perhaps the most direct in line is the educational work which the Agricultural Extension Service has been carrying on for some years in the control of tuberculosis in cattle. Fortunately, blister rust does not carry the direct relation to human health that is characteristic of bovine tuberculosis. From an economic point of view, however, it is scarcely less important, and to some people the control measures seem nearly as drastic.

In the case of the tuberculosis campaign we have an example of effective cooperation between the State Department of Agriculture and the Extension Service, while in the case of blister rust control the cooperation is between the State Forester and the Extension Service.

It will be worth while discussing this project with your County Agricultural Agent, in order to learn how he has organized his county tuberculosis campaign. I have in mind one county where the Agricultural Agent and the State Veterinarian worked with the community committee men, and in a comparatively short, snappy campaign made a clean sweep of all the diseased cattle in the county.

All of this sounds much easier than it actually was. It required the use of all manner of educational methods to convince the people that bovine tuberculosis exists, and that its eradication is necessary. Then there were committees to organize, and in turn to help them to work out plans for getting the veterinarians to visit all the herds. Finally there was the campaign which crowned the efforts of months of persistent work. This was followed by a final clean-up which resulted in making the entire county clean of tuberculosis.

In addition to the cooperation already referred to, this required many of the elements which have become so familiar to blister rust agents. First of all a county plan was necessary. As a part of the plan the goals of accomplishment had to be set. It took thought and hard work to produce this. These had to be presented to the county leaders in a way that was attractive and seemed possible to them. Then there was the continuous drive and push, and follow-up necessary to carry it to completion. Perhaps the general feeling concerning blister rust control has not yet reached a stage where we can expect general cooperation toward making a clean county. But surely it is not too much to look forward to.

The Department of Agriculture has put out a new motion picture called "Clean Herds and Clean Hearts," which tells the story of a campaign to clean out the bovine tuberculosis in an entire county. I believe if it is watched through the eyes of a blister rust specialist, it will carry some ideas that may be helpful in putting across the blister rust campaign in your particular county.

The control of hog cholera is another example of a disease which is being controlled through cooperation of the State Department of Agriculture with the Extension Service.

G. H. Collingwood, Extension Forester, U.S.D.A.

WHITE PINE SURVEY IN NEW YORK

When Blister Rust work in 1920 was in progress one of the important persistent questions that came up was: Where is the main pine belt in New York State located, what is its extent, how much F B M is there and of what types does it consist. We were on an important work, namely, control of Blister Rust in White Pine districts and there were no figures in form of a pine census available. In fact our idea of the extent of White Pine was vague. We were unable to quote any figures.

In 1921, work was started in the winter to determine the boundaries of the different types of White Pine land in Warren and Essex counties. The White Pine was noted in 3 classes, namely, (1) full stocked reproduction, (2) partial stocked reproduction, (3) merchantable.

Full stocked reproduction represents land fully stocked to White Pine such as plantations. Partially stocked reproduction represents land not fully stocked to White Pine, sometimes with and sometimes without many trees on it. The boundaries of the 3 types are noted. If many trees are on it, then we know there is a chance for future seeding in. This fact is noted in the information we obtain. If there is much pine in partially stocked reproduction, an estimate of amount to the acre is obtained. Merchantable type is worked out as to boundaries and an estimate per acre made. Previous to 1922 these estimates were ocular but on account of the value of these figures it was decided to run new strip lines through the merchantable areas, caliper-ing 1/4 acre plots throughout. This eliminated chances of inaccuracy in obtaining volume figures.

Warren County will be completed this year and probably Essex County next year. The figures are worked up by blocks on the U.S.G.S. sheets. These blocks are then worked up into township divisions and the township divisions into counties. At the time the White Pine Survey was started practically no educational work was being done. Since the educational phases of the control work was started the work on the White Pine Survey has been accelerated in order to give the blister rust control agents data to be obtained from completed maps on this work.

A. F. Amadon, Albany, N. Y.

LANTERN SLIDE TALKS WELL ATTENDED

Mr. D. S. Curtis, Agent in Oxford County, Maine, on January 7th, writes that during the months of December and January he has shown the blister rust and forestry slides in twenty-two towns of Oxford County, with an attendance varying from twenty to one hundred people. The average attendance at these talks was fifty. Mr. Curtis' comments are that the people are interested particularly in protection of the white pine from the blister rust and in planting white pine.

(Your experience with lantern slide lectures will be interesting and useful to us. How long does the lecture last, what slides and how many do you use, how do you arrange them, and do you need any slides such as of charts and graphs, etc.? Editor.)

SUMMARY OF ERADICATION WORK IN THE EAST
(New England, New York, Minn. & Wis.)

Year	1918	1919	1920	1921	1922	1923*	TOTALS
Acreage							
Worked..	138,938	254,503	282,329	386,221	481,466	895,179	2,438,636
Wild Ribes							
Pulled	2,532,087	4,708,252	5,139,843	3,688,814	5,381,675	8,151,252	29,601,923
Cult. Ribes							
Pulled.	22,150	27,877	26,054	15,774	16,061	54,894	162,810
Total							
Cost	\$102,888.20	\$142,743.71	\$96,985.27	\$72,440.10	\$99,852.01	\$161,689.65	\$676,598.94
Cost per							
Acre....	\$.74	\$.56	\$.34	\$.18	\$.20	\$.181	\$.277
Ribes per							
Acre ...	18.2	18.5	18.2	9.5	11.2	9.1	12.1

*The 1923 figures are not final.

THE ABOVE IS HISTORY

6,000,000 ACRES APPROXIMATELY
IN NEW ENGLAND AND NEW YORK
STILL TO BE DONE
SIX YEARS TO GO

SOME DISTRICTS ACCORDING TO AGENTS' PLANS
WILL BE FINISHED IN LESS
THAN SIX YEARS
WHAT HAVE YOU PLANNED FOR YOURS?

SUMMARY OF BLISTER RUST CONTROL FOR 1923 IN THE WESTERN STATES

The work in the West has been pointed at two objectives, to delay the spread of the disease into the white pine stands of the Western United States, and to make use of this delay to learn more of its habits under western conditions and develop local control methods. The work summarized, therefore, into four projects:

1. Scientific investigation of the disease, and establishment of a control demonstration area.
2. Location and eradication of cultivated black currants, nursery inspection, scouting for the disease, and educational work.
3. Experimental local control and control reconnaissance in the white pine forests of northeastern Washington, northern Idaho and northwestern Montana.
4. Inspection of nursery shipments for violations of blister rust quarantines, in cooperation with the Federal Horticultural Board.

Scientific investigation was carried under the Office of Forest Pathology. A control demonstration area was established at Cheekye, British Columbia. In this area of 160 acres, a circular plot with a 1250 foot radius was eradicated and twice re-eradicated by crews to make sure that all bushes were removed. Three rows of healthy Pinus monticola transplants were planted on each of the eight radii, along which the distance of spread of the disease from Ribes outside the circular eradicated area will be watched.

Nearly 35,000 Cultivated Black Currants Removed!

The eradication of cultivated black currants was carried on in Idaho, where helpful currant eradication and compensation legislation was recently passed. 1292 bushes were removed from 269 places. No infection was found on these or on the several hundred other currants and gooseberries examined. Some educational work was done, especially in holding identification schools for rangers and smoke chasers of the Forest Service.

In Montana, 1,879 black currants were removed from 309 places in the northwestern counties, after convincing the owners of the danger and securing their permission to eradicate. No infection was found, either on the black currants or the wild Ribes inspected. In northwestern Montana, a school campaign assisted in the location of plantings of black currants.

Black currant is classed as a public nuisance in Oregon, under a state law recently passed. The past summer four men removed 30,235 of these bushes from 1,226 places. Extensive scouting by these men during and after the eradication season, and by field employees of the State Board of Forestry, secured for the Office of Blister Rust Control information on the occurrence and distribution of native white pines and Ribes, but turned up no infection. There are now no nurseries in Oregon known to possess cultivated black currants, the eradication of 18,908 bushes from 38 nurseries this year, completing this part of the program except for periodical inspection.

Oregon also carried on a successful school campaign in 8 counties to locate cultivated black currants and to generally acquaint the public with blister rust. The value of this means of publicity is emphasized by L. N. Goodding, in charge of Blister Rust work in the State:-

"The work with black currant owners in inducing them to eradicate convinced me that the great merit of the school work lies in the general information it disseminates. I am satisfied that much of the newspaper publicity would have failed to reach the farmer and rancher if blister rust had not already been the subject of conversation in the homes. Something induced people to read, for black currant owners knowing nothing about the disease were exceedingly rare. In fact, other farmers not black currant owners, whom we had occasion to approach, seemed to be well-informed."

Black currant eradication in Washington centered in the four northeastern counties, where owners' permission to remove 1,572 bushes from 304 places was secured, and the bushes pulled. Of a total of 1,604 cultivated black and 2,731 wild Ribes examined for infection in eastern Washington, 62 cultivated blacks and 1 cultivated red were found infected in Ferry and Okanogan Counties. In Western Washington limited scouting revealed infected Ribes at 8 points in 6 counties, indicating that the rust is prevalent over the Puget Sound region. Limited scouting this spring (1923), in areas where heavy Ribes infection was observed in 1922, failed to show presence of infected pines in this region. Thorough nursery inspection revealed that 17 had cultivated black currants, which were or are being destroyed.

Scouting was carried on just across the border in southern British Columbia. Three plantings of cultivated black currants were found infected, one at Grand Forks and two at Nelson, B. C., but no infection was found on wild Ribes.

Western Control Work Practical.

A control experiment was carried on at the U. S. Forest Service Experiment Station, near Priest River, Idaho. Eradication of 1,698 acres was accomplished at an average cost of \$1.93 per acre; Ribes per acre averaged 31. Control reconnaissance studies, the making of studies, estimates, and plans of methods for the control of forest lands, were carried on in six areas in Northeastern Washington and northern Idaho. The factors governing control work on these areas, such as pine type, Ribes types, brush cover, topography, etc., were determined for these areas by running rod-wide strips a quarter mile apart, transverse to the watersheds. The observation made furnished a definite basis for arriving at a close estimate of width of crew strip possible, the acreage that could be expected per crew day, and the cost per crew day, resulting in a cost per acre estimate.

Quarantine inspection work was carried on during the spring shipping season of 1923 at Denver, Colorado; Ogden, Utah; Pendleton, Oregon; Spokane, Washington; Pasco, Washington; Seattle, Washington; Tacoma, Washington; and Portland, Oregon. During the course of this work, 40 violations of Federal and State blister rust quarantines were detected.

Quarantine inspection for the fall shipping season of 1923 was carried on at Pendleton, Oregon; Spokane, Pasco, Seattle, Washington; and Portland, Oregon. Twenty violations were intercepted during this season.

Expenditures and Common Sense.

The public, burdened by heavy taxation, is keenly interested in the spending of public moneys. Newspapers are full of tax and appropriation details; candidates for offices emphasize wise economy of public funds, public officials who have the best interest of the people at heart are doing all in their power to increase economy.

Economy is the most efficient use of time, energy and wealth. It is the prime fundamental of successful life and of successful business, as well as of successful public service.

Grasping the Dollar firmly with both hands and saying "No! No! No!" is not necessarily economy.

Enter Common Sense, inherited from many thrifty and successful generations, to determine need and to weigh Results against Cost, then the holding or the spending of the Dollar will be Economy.

In looking over for the last time your monthly expense account, can you check each item as a Common Sense Expenditure? Was each item of expense incurred only after determining need and weighing Results against Cost? Might you not have made this Dollar or that Dollar more efficient?

It is gratifying to see that many Agents are planning their work on an Efficiency-Economy basis. Reports and accounts show many cases where Agents have decided for the best interest of the work, after a just comparison of the official time and expense involved, whether to return to headquarters for lodging or to stay near the place of work. Agents, as a rule, plan their trips, especially the longer ones, to get the maximum of Results with the minimum of Expenditures.

There are instances, however, where the Agent has not stopped to balance Cost against Results. In some cases, long automobile trips have been made to make one interview or scout a single lot, when with proper planning much more work might have been accomplished on the same trip. In others, the automobile was used when railroad or trolley fare would have been more economical.

Such instances are not in accordance with the Spirit of Blister Rust Work, nor do they serve to validate the trust placed on us as individuals and as an Office to expend public funds economically for the best interest of the people.

DOES IT PAY TO ADVERTISE? IT DOES!!

Did you notice in The Blister Rust News Letter for December 10 that little note on a new set of lantern slides for Maine? Apparently this was noticed, since the Washington Office has had calls for these new slides from Connecticut, New York and Massachusetts and has sent a similar set into New Hampshire. Are there any more requests?

The News Letter - Its Function.

While this News Letter is a house organ in the sense that it circulates largely among our fellow workers, it also serves to keep our cooperators and others informed of the latest developments and progress in our control work.

Did you ever try to put in practice any of the helpful ideas that appear in the News Letter?

Do you read the Letter clear through and then file it for reference?

Your criticisms and suggestions for improvement of this paper will help make it more valuable and useful.

A New Policy.

This issue of the Blister Rust News initiates a new policy. The material for the New York Number was arranged by New York men, as far as their suggestions were in accordance with the general policy of the Office. Next month, all material for the News will be arranged by Massachusetts men. Maine will arrange her number (copy due on March 20th), then Vermont (April 20th), New Hampshire (May 20th), then Connecticut and Rhode Island. The idea is to make each successive issue of greater interest and usefulness than the preceding one. In putting out these State Numbers, the men of the individual State will be responsible for all changes in arrangement and contents they suggest for their number. The Editor will still be responsible for the collection of supplemental news and articles from other states.

Criticisms of the outline followed and material contained this month will be appreciated.

WHAT DO YOU WASTE?

We recently had a Thrift Week, and a good deal of thought and energy were devoted to the subject of thrift. Talk about thrift, however, does not do much good unless it is strictly personal.

Suppose you ask yourself these questions:

1. Do I waste time?
2. Do I waste health?
3. Do I waste food?
4. Do I waste opportunity?
5. Do I waste the happiness of others?
6. Do I waste my reputation by not keeping my word and needlessly offending others?

If we will apply this kind of scrutiny to ourselves and not to other people it may be of help.

QUESTIONS THAT ARE ASKED OF BLISTER RUST AGENTS.

During the fairs in my territory, of which I attended three, I had a blister rust and reforestation exhibit. There were a lot of deep questions asked by different people; some of the farmers expect us to know all the names of the different plants and weeds that grow in woods and fields, as well as the different plants that the bees feed on during the honey flow. There were two farmers who came from back on the hills, with two bushel baskets of weeds and fungi which they asked me to identify - some of them I knew, but a whole lot of them I didn't. They asked me too, what was killing the trees back on the mountain, such as spruce and maple, and if blister rust was killing their apple trees. Another brought a lot of rose bushes to find out their names, and what the gall or ball-like fungus was that had formed on them.

They wanted to know how to get live-forever and paint-brush off their lands. One woman said that if I would tell her how to get live-forever out of her meadow, she would eradicate blister rust, but so far I have never found out any practical way to do this.

H. A. WILLIAMS, OTSEGO CO., N. Y.

The above I feel sure is a fair sample of the questions asked of our Agents. Let us own up to the fact none of us can answer all questions. But here is the point in the above. Did we give the people the best information we had, and state exactly who could give the correct answer to the questions. For example, in regard to honey plants, the Agricultural Experiment Station at Ithaca and the Department of Agriculture at Washington could both answer the questions. If matters pertaining to Forestry arise, hand the questioner a slip of paper with such an address as, "State Forester, Conservation Commission, Albany, N. Y."

In short, satisfy the questioner by referring him to the proper National, State or Local authority, preferably in writing.

EDITOR.

Boy Scouts of the City of Amsterdam, N.Y. set out several thousand white pine in Fulton County last spring. A public-spirited citizen donated the land to that use - and both reap the benefits. The donor's land became more valuable; the Scouts receive valuable training in the spirit and practice of conservation. Needless to say the land was cleared of currants and gooseberries before planting.

THE NICHE OF WHITE PINE IN THE WORK OF THE NATION.

White pine, according to the 1920 cut figure, is the sixth most important species to the lumber industry.

Lumbering is the third largest industry in the United States, employing 839,000 wage earners, and carrying a capital investment of more than \$3,000,000,000.00.

EXHIBIT SECTION

Nearly all of you have tried your hand at putting up exhibits for show windows, at outdoor meetings, at local fairs or big expositions, with more or less success.

Did you ever stop to analyze the good points in a window display of dress goods in one of the big stores, or why one exhibit at the Fair attracted your attention and another didn't. If not, why don't you?

Some of the cardinal principles of exhibit work such as ours, according to Mr. F. L. Gall (Specialist in charge of Exhibits for the Bureau of Plant Industry) are the following:

PLAN YOUR EXHIBIT TO ACCOMPLISH A DEFINITE PURPOSE

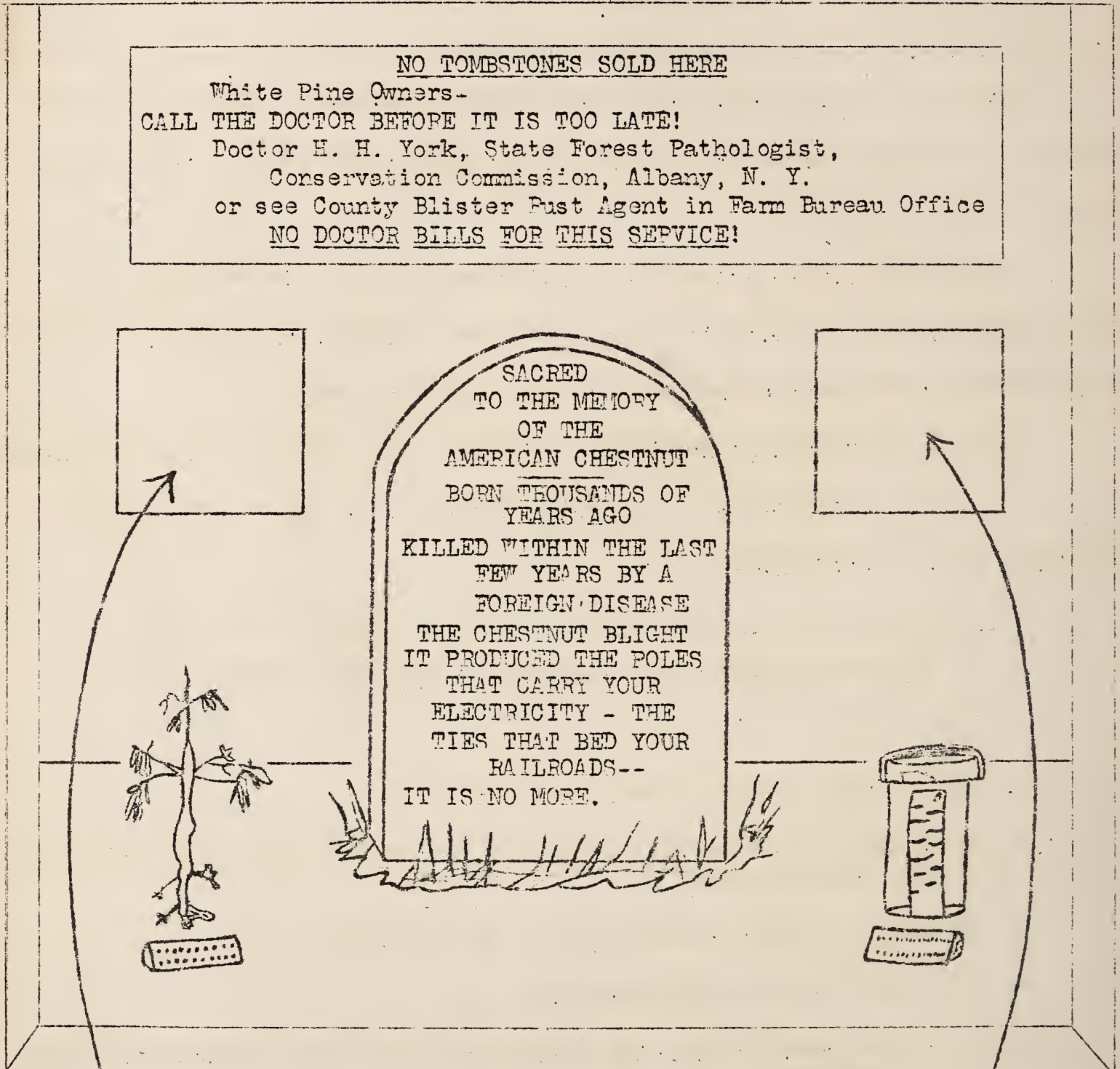
1. Concentrate on one or two essential ideas.
2. Coordinate the materials to secure the end in view. Omit irrelevant or extraneous matter.
3. Be brief. Avoid overcrowding of the exhibit.
4. Show few but good illustrations.
5. Lettering must be neat and should be of type and size proportionate to the exhibit.
6. Exhibit local material or specimens. Label specimens neatly and in as few words as possible.
7. Make exhibit attractive. Have colored pictures where possible. Exhibit should compel attention.

PROVIDE AN EASY PATH TO ACTION, SUCH AS "WRITE OR SEE THE BLISTER RUST AGENT"

EXHIBIT PLAN SECTION.

Suggestion for a window exhibit adaptable to all states.

One exhibit can be prepared in each state and used in several different districts.



Legend-

White Pine Blister Rust, also a foreign disease, threatens the destruction of white pines in New York State. The disease has become established in this region.

Unless it is controlled, white pine will not grow where conditions are favorable for its spread.

Legend-

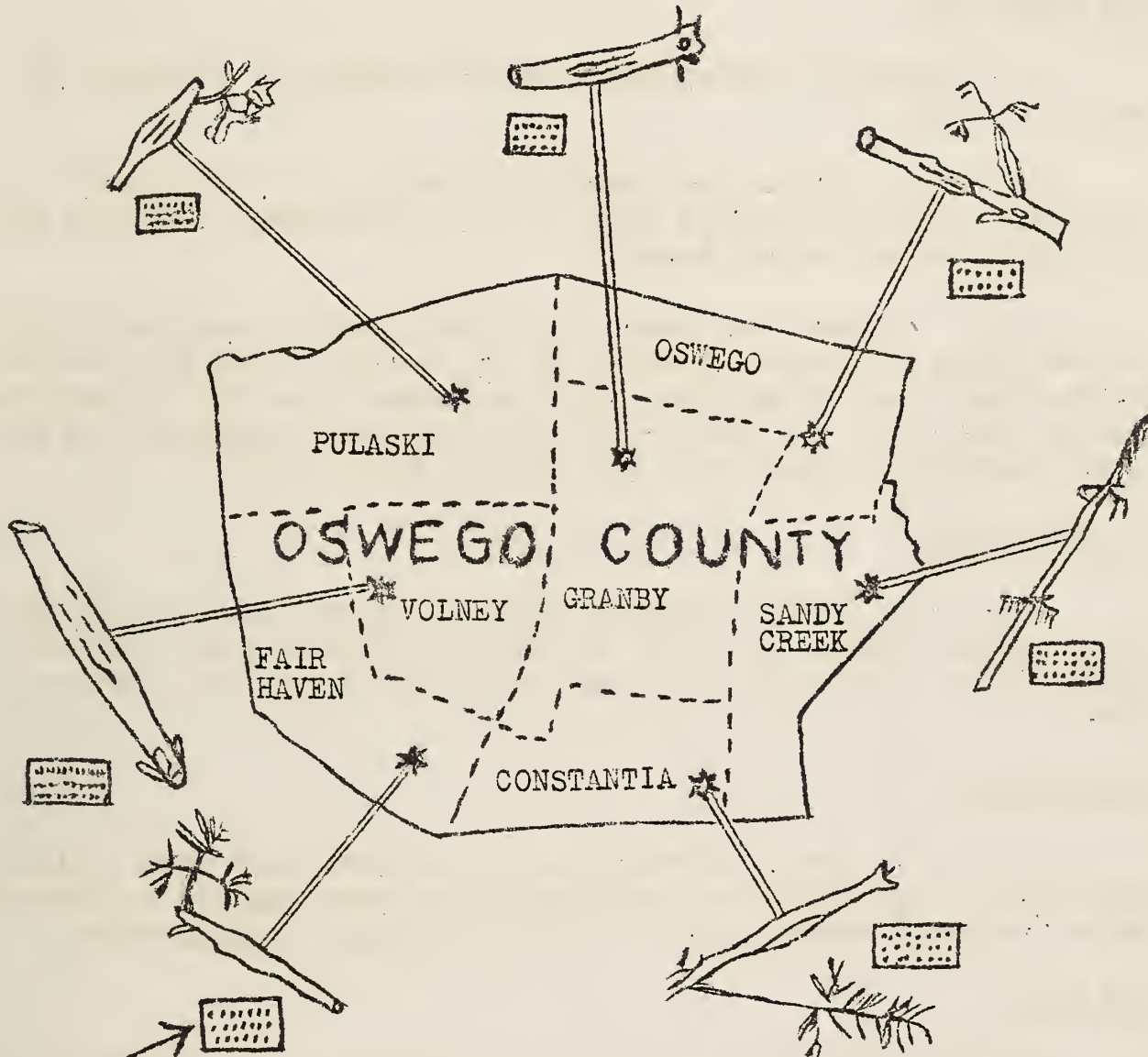
Unlike the chestnut blight, the white pine blister rust can be controlled by practical methods. Literature for the asking, inside.

U. S. Dept. Agriculture,
Conservation Commission,
Local Farm Bureau,
Cooperating.

Suggestion for Window, Fair, and Farm Bureau Office (permanent) Exhibit-Piece.
One for each county.

beaverboard

WHITE PINE BLISTER RUST IS WIDESPREAD IN OSWEGO COUNTY



EXAMINATION OF YOUR PINE LOT,

LARGE OR SMALL, WILL GLADLY BE DONE FREE OF CHARGE.

WRITE OR SEE

COUNTY BLISTER RUST AGENT, MR. - - - - AT FARM BUREAU OFFICE.
(U. S. Dept. Agriculture, Conservation Commission, Local Farm Bureau,
Cooperating.

Sample Card Legend-

"This Blister Rust canker found in town of Fair Haven, about 2 miles east of Fair Haven Center on the northern side of the Hill Road.

"Town of Fair Haven has about - - - acres of white pine.

"Disease is general there, about -- % of the pine is already infected."

P E R S O N N E L

New Hampshire

Mr. Arthur F. Allen, Agent in New Hampshire, resigned in November, 1923.

Mr. W. J. Cullen, of Strafford County, N. H. spent his Christmas vacation with his folks here in Washington. Cullen made us a call; to our mutual benefit.

J. J. Fitzpatrick, Agent in Belknap County, has been forced to take leave of absence because of ill health. Fitz has been in Blister Rust Work since 1918, and his absence from the firing line will be felt. We wish him a rapid and complete recovery, and frequent messages of cheer from the Blister Rust family.

Massachusetts.

Mr. W. D. Black, formerly agent in Massachusetts up to June, 1923, is now working in the U. S. Forest Service in the Southern Appalachians. His address is care of Forest Supervisor, Bristol, Tenn.

Connecticut.

Mr. H. F. Round, formerly on the Blister Rust Work in Connecticut, is now with the Pennsylvania Railroad engaged in forestry work. He was a recent caller at the Washington headquarters.

New York.

Mr. Robert W. Putnam, who was in charge of the Federal data crew at North Hudson this past summer, passed through Washington about a month ago on his way South and called at the Office. He is now Forest Assistant on the Alabama National Forest at Moulton, Alabama.

Mr. S. H. Fogg, Agent in Warren County, N. Y. has just announced his engagement to a Dover, N. H. girl.

Rhode Island.

Mr. O. C. Anderson has announced his engagement to Miss Gracia Britcher of Syracuse, N. Y. Is the new Maxwell coupe' responsible for this, Andy?

Western Division

Miss Constance Alexander, Clerk in the Western Office at Spokane, Washington, is taking a few months' leave, to attend to personal business. While in the East she visited the Washington office.

Washington Office.

Mr. H. P. Avery, Chief Clerk in the Washington Office has been called home to Arkansas on account of the serious illness of his father.

Mr. W. R. Shinn, Field Assistant in Washington, who has been with the Office since April, 1922 recently resigned.

YOUR QUESTION ANSWERED - - - - -

Any questions of general interest will be answered in this column; address your letter to the Editor.

Que. What is a Collaborator? How does he differ from a Cooperator?

Ans. A Collaborator is a person carried on the rolls of the Department under formal appointment, usually receiving a nominal compensation. A Cooperator is a person or organization performing some useful service for the Department, permitting his or its premises to be used by the Department, or furthering the work of the Department in any substantial and useful way, but receiving no salary of any kind and not carried on the appointment rolls of the Department (Memo. of the Secretary, No. 414).

PUBLICATIONS


White Pine:

Belyea, Harold Cahill: The Control of the White Pine Weevil (*Pissodes strobi*) by Mixed Planting.

Journal of Forestry. Vol. 21, No. 4, pp. 384-390, April, 1922

This is an interesting article. The author draws the conclusion that mixed planting of Scotch and White Pine offers a method of control of the white pine weevil. He says, "While it does not offer absolute protection of the white pine, it does result in relative protection and reduces materially both the severity and duration of the infestation."

ON THE FIRING LINE WITH Ribee Bill



Well! Well! Well! This State Number idea sure got action from the Empire State Blister Rusters. Good work, New York!

That scheme of Jim Kennedy's of practicing what you preach is good stuff. I know several fellows on the work who are planning to buy land and reforest it with white pine. I've got a few acres in view myself.

Did you read those basic principles to be observed in exhibiting? Many years of experience and parts of many volumes are summed up in those few words.

Mr. C. C. Perry, State Leader of Massachusetts, was the only Leader to present his Annual Report for 1923 on time. The report is complete, well planned, written in detail, and put up attractively, and reached the Office on January 15th by Special Delivery. Congratulations, Mr. Perry.

School campaigns, I notice, are very successful in the West. Glad to see that they are not limited to Western work, according to Pete Miller's article.

"American Forests and Forest Life" formerly "American Forestry" says that the English (or Persian) Walnut is the result of thousands of years of evolution, for it was in the beginning small, hard-shelled, and hard to crack.

Like some of our pine owners, only we cannot wait for evolution to change them.

It's an ill wind that blows no one good, according to Jack Frost. Recently a wild article on the control of Blister Rust by airplanes based on misinformation was printed in Maine and Massachusetts papers. Jack got busy immediately with a cooperative article, which he says received publicity ten times normal.





BLISTER RUST NEWS



MAR 15 1924

U. S. DEPARTMENT OF AGRICULTURE

Office of Blister Rust Control

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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry
Washington, D. C.

THE BLISTER RUST NEWS

Issued by the Office of Blister Rust Control,
and Cooperating States.
Vol. 8, No. 2

MASSACHUSETTS NUMBER

MARCH 15, 1924.

RADIO PROGRAM

Stations B R E and B R C broadcasting from the "studio" of the Massachusetts Department of Agriculture, Room 136 State House, Boston, an all Massachusetts program in blister rust news, presented by the following assisting artists.

Massachusetts Blister Rust Organization

State LeaderC. C. Perry

District Agents

I Essex.....	Wm. T. Roop	VI Worcester (North)	R. W. Merrick
III Plymouth-Norfolk..	E. M. Brockway	VII Franklin-Hampshire ...	P. C. Morse
IV Worcester (South)..	Edw. J. McNerney	VIII Hampshire-Hampden	R. E. Wheeler

Temporary Assistants

Wm. Clave

F. M. Dickey

G. S. Doore

The State Leader wishes "to announce" that,-

Although the season's work of 1923 is now past history, it is not out of place to record here that it was a banner year for cooperative blister rust work in Massachusetts, making commendable progress in the campaign of presenting in a calm and sensible manner the important facts concerning blister rust and its control. The public in general and the pine owner in particular are apparently beginning to appreciate the importance of protection and have shown a live interest in the service which the Agents are endeavoring to render.

In this state the policy is to concentrate in a number of towns in each district, each year, rather than attempt to do extensive work throughout the district. The educational features of control have been conducted almost entirely on the principle of personal contact with the individual property owner, supplemented, of course, by such general publicity as conditions require and circumstances permit.

Field examinations to eliminate Ribes have been made on a larger area than ever before in Massachusetts, very nearly two hundred thousand (198,631) acres of land having been examined, in the protection of about 125,146 acres of pine. In this work, 1056 property owners have cooperated, 470 in the removal of wild and cultivated Ribes and 586 in the removal of cultivated Ribes only. Wild Ribes to the number of 1,558,107 and 14,837 cultivated Ribes were removed during the field season. The average cost per acre for Ribes eradication work alone was 12¢ and for all blister rust control work, including administration, supervision, educational activities and Ribes eradication, the cost was but 24¢ per acre.

- - - - -

A few figures on the per acre cost of Ribes eradication included over a period of years are of interest.

1918..... 81¢ on 18,706 acres

1919..... 71¢ on 10,849 acres

1920..... 54¢ on 19,389 acres

1921..... 33¢ on 32,933 acres

1922..... 18¢ on 61,642 acres

1923..... 12¢ on 198,631 acres.

Note. For the years 1918 - 1921 inclusive, the per acre cost figures cover labor, transportation and supervision: for the years 1922 and 1923, the per acre costs are based on Ribes eradication work only, including labor wage and miscellaneous

expenses incident to eradication work.

- - - - -

It is gratifying to be able to report that in spite of the wave of economy that threatened to seriously curtail our cooperative blister rust control program, the joint Ways and Means Committee of the State Legislature, after careful deliberation, have recommended the restoration of the budget items as originally requested by the State Department of Agriculture, namely \$18,000. We feel that this action is a very reassuring endorsement of the efforts of our organization and an acknowledgement that our program is correct and on an economically sound basis. It also indicates, we believe, that the work on the firing line is gradually sifting back to headquarters and that's what counts!

Dr. Gilbert, Commissioner of Agriculture, ably handled the situation before the legislative committee. Faced with determination on the part of the "powers that be" to reduce expenditures, he presented the facts in such a fair and convincing manner that the committee was apparently most favorably impressed. The restoration of the amount cut from the appropriation (44%) in the face of the most persistent campaign of economy ever attempted in Massachusetts, speaks well for our work.

The Massachusetts Blister Rust Control Agents are determined to show the public and the Legislature that the confidence placed in their efforts is not amiss and we look forward to the best year ever, for cooperative blister rust control work in the state. BRING ON THE RIBES!

C. C. P.

- - - - -

Ribes Beware! Perry is a name associated with victory. It was Commodore Perry who said: "We have met the enemy and they are ours."

- - - - -

"The next number on the program" will be the presentation of,-

A Plan to Secure Cooperation from Non-Resident Owners

IT WORKS!

In attempting to reach the non-resident owner, resort must usually be made to correspondence. Letters - BUSINESS LETTERS - that are short, concise and to the point get results. In handling this problem, success has been attained when the following points have been borne in mind:

1. Locate as much blister rust and as many Ribes as can be found on the owner's place or enough information for at least three letters. Find out as much about the owner's attitude toward his pine crop as convenient.
2. Secure cooperation with as many adjoining resident owners as possible; also if possible locate blister rust and Ribes on their places.
3. Write the owner a short, concise business letter, giving only sufficient facts about conditions on his place to arouse his interest.
4. Should he fail to reply, send along another letter of the same sort, a little more aggressive, but polite, with more startling information about his place and surroundings, but never giving him quite all the facts in your possession. These letters carefully worded, are quite sure to bring an inquiry about some part of your letter which has aroused his curiosity.
5. Your reply should then clear up all matters of doubt in his mind and call to his attention the damage likely to occur to his white pines from blister rust. The slight expense for effective control, in proportion to the value of his pines, should be stressed. Immediate action should be urged and express your willingness to help, in so far as you can, while located in his vicinity.

The sample correspondence following, will give an idea of how this system has actually worked out in Essex County, Massachusetts, with very encouragingly satisfactory results.

(Cooperative Letter-head)

Field Address: Rowley, Mass.
Nov. 21, 1923.

Mr. _____,
_____, Mass.

Dear Sir:

You are no doubt aware that the White Pine Blister Rust is present to a serious extent in Essex County, and infection has been found on your estate in Rowley. Our examiner reports conditions favorable for its continued spread in the vicinity, unless prevented by the effective and inexpensive control measures perfected by the authorities engaged in this work.

You are requested to cooperate with the federal and state forces now working in the vicinity, for the protection of White Pine. An early reply would be appreciated.

Very truly yours,

Agent in charge.

34 Street,
.....
November 27, 1923.

.....
Agent in charge,
.....

.....Mass.

My dear Sir:

Replying to your letter of November 21, I am surprised to hear that you found "White Pine Blister Rust" on my place in Rowley. I had gathered the impression from my farmer Mr., that no rust had been found on my property. Would you be able to indicate to me the approximate locations where you found the rust?

Will you also kindly let me know what cooperation you have in mind with the federal and state forces to which you refer in your letter?

Thanking you for your kind attention, I am

Very truly yours,

(Cooperative Letter-head)

Field Address: Rowley, Mass.,
Dec. 3, 1923.

Mr.
.....St.,
.....Mass.

Dear Mr.:

I have received your letter of November 27. I would be glad to make an appointment to meet you on a Monday or Friday afternoon and show you White Pine Blister Rust on your white pines. It would no doubt interest you to see a very heavily infected area on a nearby estate.

The effect of control work on the W. B. Palmer estate in Topsfield, and the effect of the lack of cooperative control on the property of E. T. Crane, Jr. in Ipswich are two striking contrasting examples.

The Federal and State Departments of Agriculture are cooperating with pine owners for the control of blister rust and limited funds are available for this work in Rowley for the season of 1923-1924. Advice and supervision are furnished without charge.

Intensive control work has been pushed forward since May 1, 1922 and the pines of all cooperating owners have been protected in ten towns in Essex County at an average cost of 4 to 16 cents per acre.

Very truly yours,

Agent in charge

34St.

.....
December 6, 1923.

.....
Agent in charge,

.....
.....Mass.

My dear Sir:

I will be very glad to do anything reasonable to protect my pine trees from the pine blister rust. Can you secure cooperation from neighboring land owners, for if they do nothing I presume that my trees will be affected almost as much from my neighbors' as from the gooseberry and currant plants on my own land?

I wish that you would let me know what is the procedure to be followed and what time of the year the work should be done. If it should be done in the fall I would very much like to have it undertaken at once, as soon as I know about it. The cost as stated in your letter is so reasonable, and the pines mean so much to me that I wish to avoid any unnecessary delay.

Will you, therefore, kindly let me know exactly how the work is done and what cooperation the state and the government give and what I should give.

I do not know when I shall be in Rowley again on Monday or Friday afternoon, but I shall endeavor to make an appointment with you within the next few weeks.

Thanking you for your kind interest and attention, I am

Very sincerely yours,

W. T. R.

They say that Mr. Roop is the Granddaddy Blister Rust Agent. He was born January 23, 1859; figure it out for yourself. You would never believe it to follow him about some day, particularly during the Ribes eradication season!

"The next selection" is a parody,-

Yes! We have no Cultivated Ribes!

Plymouth County is THE White Pine county in Massachusetts, where in spite of the continual drain by lumbermen, the forests are practically on a sustained yield basis. Pine is practically continuous throughout the county and young pine covers an unusually large percentage of the forested acres. It is therefore one of the most important counties for blister rust control work. A very definite procedure is followed, in the endeavor to acquaint every last pine owner in the county with the characteristics of the disease, our work in general, and in addition, to have the public realize just what our work means to the community as a whole.

This is being accomplished, we believe. The procedure is very simple.

Each year, a definite number of towns are listed as the goal for the year and the order in which they will be canvassed is decided upon. The first step then, is to call upon the Selectmen and to inform them as to the aim and purpose of the work and to enlist their support. The average Selectman likes to be made of. They can be of distinct service by suggesting the names of other influential men in the town; by giving their moral support; by making available lists of pine owners, resident and non-resident; and so on. Then the Tree Warden and the Moth Superintendent must not be slighted. They too like to be recognized.

Having secured as complete a list of pine owners and influential men as it is possible to obtain, our next step has been to actually call at every house throughout the pine areas. Many times the occupant owns no pine but can tell you who does own most of the pine land throughout the neighborhood. This information, of course, is properly recorded for further reference. The non-pine owners or tenants may own cultivated Ribes and then our troubles begin.

During 1923 some 6000 cultivated Ribes were pulled up in this county and yet only three people demanded compensation. Each of these cases were deserving. Many people owned cultivated Ribes and no pine, but were willing to take the Ribes out to protect their neighbors' trees. Some had from 50 to 100 bushes recently set and yet, out they came to save the pine crop of the future. Persuasion and not compulsion accomplished this result. Of course several hard-boiled individuals were encountered, but with the proper amount of persuasion and a few kind words they all usually come around. Persuasive methods secure lasting cooperation, whereas compulsion nearly always causes hard feelings and antagonism. It has been hard to win the confidence of many people, but in the majority of cases they have finally been converted to our cause and now are real rooters and uprooters. YES! WE HAVE NO CULTIVATED RIBES!

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Non-resident owners are reached by the use of letters patterned after those used by Mr. Roop in Essex County. The method has been successful.

Wild Ribes are very scattering in their distribution throughout the county, conditions approximating those existing in Rhode Island. For this reason, during the summer months, pine lands are scouted by State Scouts. All scattering Ribes are pulled. Places where they happen to be abundant are left for the owner to eradicate under our supervision. This brings up another complication which seems to be existent in Plymouth County; that is, that many times a small lot of no more than 25 acres may be owned by as many as 15 different people scattered in as many different towns. In this type of ownership, Plymouth County seems to differ from other districts where it is not unusual to find instances where 4 or 5 men may own anywhere from 1000 to 15,000 acres in one town.

Window displays, posters, lectures, fair exhibits & news items in the "Plymouth County Farmer" and local newspapers, complete our efforts to thoroughly acquaint the residents of our county with what we have attempted to do, are now doing, and will continue to do until our goal is reached.

E. M. B.

"Bedtime stories for grown-ups will follow directly!" -

CONVERSION

Some New England farmers are so hard shelled, that progress runs off them like water from a duck's back. The only thing that sticks to this type of farmer is money. He has a one-way pocket. This past summer we had occasion to deal with two brothers who were of this type.

Cooperation was hard to obtain. They wanted us to do the work, to which we agreed, if they would pay for it. "How much", was hurled at us simultaneously by both. We informed them that from four to six dollars would cover the cost. They both registered horror, they argued that they had no wild Ribes, no blister rust, and they couldn't spend the money. They finally agreed to do the work themselves, with our supervision.

They owned a valuable stand of pine, nearly mature. It was an ideal place to find Ribes and we were not long in doing so. The first gooseberry bush was heavily infected, and a seedling pine close by was dying. Three more pines nearby were found infected, one was dead.

Both farmers were crestfallen after their cock-sure statements as to the absence of the disease. With the wind removed from their sails they went to work and eradicated over 300 Ribes on their place.

To their credit, it must be added that they became attentive and exhibited a tendency to learn, saving the infected specimens to show their neighbors, and to tell the story of their conversion to blister rust control.

TEMPORARY DEFEAT

We met temporary defeat last summer at the hands of a Jewish farmer, with the aid of his vitriolic-tongued wife. He owned flowering currants that we were desirous of having him donate to the cause. He couldn't see it for a minute!

If those bushes were removed it would lower the sale value of his property. "What is the law?" he demanded. We told him. He didn't believe it and said so! He would see his lawyer. We continued with our story and he began to get reasonable, saying we might have the bushes if what we said was correct. We began to feel elated with ourselves, when suddenly we heard a wild feminine cry and observed the "Boss" coming as fast as her weight would permit. She shrieked something at her husband in Yiddish, then turned her guns on us. We don't know what she said, but she sure said it forcefully. That girl had us whipped to a stand-still. We tried to continue our story with her husband, but that was out of the question. She would be heard.

When she became exhausted from her efforts, and was sort of getting her second wind, her husband completed the rout. "Where are your credentials?" he asked. Immediately we reached for our official cards. They were in the office in a note-book we had been using there the day before.

Retreat was sounded, and our forces temporarily withdrew, smatting under defeat but with a lesson well learned.

E. J. McN.

"We will now broadcast by special wire from the Gardner Chamber of Commerce;-

FAIR EXHIBITS

The value of the county fairs as an adjunct to our educational work in blister rust control has been discussed and reports of results obtained have varied widely.

During the past two years I have had considerable experience along this line in Worcester County and feel that some of my observations may be of service to other agents. In 1922 some 15 or 16 fairs were covered in the whole county

ranging from those in the large cities to the small one day fairs held under the auspices of the local Grange. In 1923 the work was done in the northern part of the county only and but 5 fairs were visited.

The decision to attend the smaller number of fairs in 1923 resulted from the experience gained in 1922.

I do not think that , except in certain cases, the large fairs are worthy of consideration from a blister rust standpoint. It is true that they are attended by large numbers of people, but they come more to be amused than to look over the exhibits.

The small town or the Grange Fair are much more productive of results. Here the people come to really see the exhibits and the interest is keen. It is a sort of an old home day for the townspeople and their friends and no exhibits are overlooked. The people are not in such a hurry and will stop and talk things over. Then too, you often meet people whose woodlots are nearby and it is possible to get out and inspect them at once. The owner usually asks some of his friends to go along too, so that the Agent gets a chance for some real worth while educational work.

If you are to "show" at a fair make all your plans well in advance. If possible, visit the Secretary or whoever is in charge and make sure of your space. Look over the grounds and buildings and decide what will be the best place for your exhibit.. Knowing the space, you can make up your exhibit to fill but not overcrowd it. It is a good idea to have both limb and trunk infections, also samples of a few of the different kinds of wild Ribes growing in that section. Get all your specimens as nearby as possible and have them fresh. Be sure they are clearly and properly marked. Get there early and have your exhibit arranged before the people begin to come. Be certain you have plenty of cards and folders to distribute and a book in which pine owners may register.

If there is a local paper, by all means make use of it and get some publicity a few days before the fair opens. Of course, you cannot always get all of it printed, but there will be enough to arouse interest. I have been told time and again that people have come to a particular fair just to see the blister rust exhibit, because they read about it beforehand. Close your news item with some such paragraph as the following:

In order that the general public and particularly timber land owners can get first hand information and see specimens of the disease, the United States Department of Agriculture and the Massachusetts Department of Agriculture cooperating, have arranged to stage an elaborate exhibit at theFair. No one in any way interested in timber or in our woodworking industries should fail to see this display. It is under the general supervision of Blister Rust Control Agent who is in charge of cooperative control work inCounty. He is making his temporary headquarters in where intensive control work is under way in cooperation with local pine owners.

.....assures us that not only will he devote as much time as possible to theFair but will have someone trained in blister rust control work constantly in attendance to answer questions and furnish information.

R. W. M.

The following report has been received from District VII,-

The pine in many sections of District VII has been largely cut off so that reforestation is the real big problem. Many of the towns are so isolated from railroad facilities and the land is so rocky that agricultural pursuits are difficult to engage in. The land is ideal for the planting of white pine. Thus far, it also appears that Ribes are almost entirely absent. Just why, we are not able to report for conditions for Ribes growth seem favorable in many instances.

Blister rust has been found on pine in a number of towns, but not to an alarming extent as yet; in fact, if we need a real good set of specimens for an exhibit, our neighboring agents usually have to fill our most urgent needs. One very good source of supply was found in an infected area in the town of Orange last year.

The land owners in this district have shown a very keen interest in the work, however, and are particularly anxious to get out into the woods and see conditions first hand. The absence of Ribes in any numbers in this section has simplified our problem very materially, although it takes time to determine what conditions actually are in the field.

We are also fortunate in not having to contend with very many cultivated Ribes. Where we do encounter them a statement something like the following is our best card and almost always it is a Bull's Eye Shot.

Blister Rust Agent: I notice that your Chestnut trees are all dead.

Land Owner: Yes! That blight killed 'em they say. That's a sure bad thing alright.

Blister Rust Agent: Yes, it certainly is a serious matter and Chestnut trees are practically doomed at least during our time. Now, if it had been possible for you to save your Chestnuts a few years ago by pulling up a few raspberry or blackberry bushes, for instance, you would have been glad to do that, -wouldn't you?

Land Owner: You jest bet I would! And if you say that those currant bushes might do the same thing to my pines, I'll Yank them out, jelly or no jelly. I like gooseberry pie too but I guess I better say good-bye to those gooseberries.

And out they come!

P. C. M.

"The next number on the program" will be the latest reports from the foothills of the Berkshires."

Owing to the exceptionally mild and open winter, it has been possible to cover a considerable area in our territory, making pine inspections with comparative ease and getting in close touch with the pine owners by personal interviews.

An especial effort was made in the towns of Westfield and Southwick to locate infection on pine, but owing to the type of country, none was found. In the towns of Huntington, Worthington, and Chester, however, blister rust is very prevalent on pine. In December several studies were made in these towns.

In the town of Huntington on Goss Heights, a $3/8$ mile rod-wide strip line was laid out, and the pine examined. Out of a total of 129 pines, 42 were infected with blister rust or 32%.

In the town of Chester at Chester Center, a $1/4$ acre plot was laid out and 1384 young pines were examined; 907 (65%) were found dead and dying from blister rust. The infection in both instances came from *R. cynosbati* growing along stone-walls, in the vicinity of the pines.

Pine owners have been very receptive, fully realizing the importance of protecting their pines from blister rust infection. Sufficient cooperation has already been obtained to keep us on the jump for the coming season. We look forward to an exceptionally busy time owing to the large number of pine owners who have signified their desire to have us assist them in removing the *Ribes* on their lands.

RE the Editorial in the NEW ENGLAND HOMESTEAD

Undoubtedly many of the blister rust workers saw the "Shoe Pinching" editorial in the December 1st issue of the New England Homestead. I had the pleasure of interviewing the Editor, Mr. Seavey and after I had informed him regarding our blister rust campaign, he became a staunch supporter of the cause and completely sold to forestry in all departments. Furthermore, having cultivated *Ribes* on his place, he now wishes to "pinch his own toes" and remove his own *Ribes*. In a subsequent issue of his paper, he inserted an editorial explaining his changed views.

From a recent interview with Mr. Seavey, he has manifested his whole hearted interest and cooperation by offering to print an article on some phase of our work in a later issue.

ONE LUMBERMAN APPRECIATED THE IMPORTANCE OF PINE REPRODUCTION

While inspecting pine with one of the largest owners of white pine in the town of Blandford, a man who has made a fortune from his timber; I was greatly impressed with the almost reverence with which he regarded his young pines. In getting over a fence he stepped on a young seedling. "Look what I have done", he said, "I have destroyed what would mean an income to my grandchildren." We do occasionally meet such persons, and more and more is the farmer beginning to realize the importance and value of his pine as representing one of his regular farm crops.

R. E. W.

"An announcement:" Tune in on Station W B Z some night and you may hear Agent Wheeler microphoning to pine owners. He has been improving one evening a week by attending a course in Public Speaking. What is believed to have been the first blister rust radio talk was broadcasted by Mr. Wheeler, from Station W B Z of the Westinghouse Electric at Springfield, Massachusetts on the evening of July 3, 1923. Has anyone heard of an earlier record? C. C. P.

(Dr. York at Albany and Prof. Barss, at Corvallis, Oregon, broadcasted blister rust talks last spring. Editor)

We regret that time has not permitted us to have the temporary agents take a part in this program.

Mr. Clave is assisting with the work in Worcester County in scouting for infection and assisting with correspondence with non-resident owners, which is a big problem in northern Worcester County.

Mr. Dickey has been located in District VIII where he has been doing extensive scouting for infection and general educational work with pine owners.

Mr. Doore, has been assisting the State Leader in our attempt to bring our map system up to date. We hope to be able to supply the Agents with the two-time enlargements of all the towns listed in the 1924 plan of work and to do

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this before the Ribes eradication season begins.

C. C. F.

"Our next offering" will consist of a few jingles contributed by Messers. Merrick and Perry. "These will follow in one minute."

"A little Nonsense Now and Then,
Is welcomed by the Best of Men."

A Christmas card received by one Agent read as follows:

A Christmas Lamentation

"I think of you in the Springtime,
I miss you in the Fall, some
But especially at Christmas time
I Pine Fir Yew and Balsam."

The gooseberry bush hanging in the tree looked enviously down at one the crew had missed. Suddenly its expression brightened and looking at the growing bush said,

"As you are now, so once was I
As I am now, so you will be,
Prepare for death and follow me."

"How come?" asked the healthy one.

"Because", replied the other,

"I see Dick Marble, the State Inspector heading this way."

PAUL REVERE RIDES ADVENTURE TURNPIKE

(A new idea in blister rust control, published in a boys' magazine. The Professor makes startling disclosures but his heart is in the right place. We have all met our Jeddars and have had just as much difficulty in rescuing the pines as the hero of this tale. The author has been thanked for the first class publicity given our work, and the real remedy explained to him. Editor.)

Quotations from the Third Chapter of "The Chronicles of Adventure Turnpike, "appearing in "The Pioneer", February 23, 1924.

"What if the pine blister should get to those trees!" said Bert, thinking of far-off China and what the Endowments must mean to a hospital and a school.

"I've written to Jeddard to send us the first news of the pest," explained the Professor. "Sent the old fellow all the latest information regarding the disease. Pretty new stuff for him, I suppose."

Bert and the Professor worked among the trees along Adventure Turnpike,

searching for signs of the dreaded rust. Bert was surprised at the remedy used by the tree expert. Mr. Doane carried bundles of currant bushes and planted some among the pine trees that showed signs of infection. Bert learned that the disease was kept off by the currant bushes. But why it should be so he seemed to have hard work in determining for himself. The Professor was very technical.

Then the Professor passed on to the upper end of the state, where a big gang of pine-blister workers awaited his arrival.

Suddenly Bert gave a startled gasp. He saw a rusty, dead cluster of half-grown trees straight ahead of him. With beating heart, he urged his pony forward. What he saw disturbed him and brought a great fear into his heart. Fully an acre of valuable growth was half dead from the spreading, dreaded blister. This must have been seen by the man Jedder, for it lay near the path Jedder must take on his rounds of inspection. The blister must have been in progress when Professor Doane had been in the vicinity, but it had not been reported. Why?

Bert raced his pony forward and, an hour later, came to the opposite side of the Endowments. Here a little old white house stood in the midst of a desolation of huge mounds of old sawdust.

Jedder proved to be an old, lantern-jawed man with hard eyes. He was brown and leathery, with strong, bony hands that seemed made for hard labor. The man was illiterate in his speech, but Bert later learned that though Jedder knew nothing about arithmetic or writing, a man could give him the dimensions of a barn, and by some weird process of inspired calculation, Jedder would cut down the trees and saw the timbers and boards and trimmings with such exactness that there would be no waste.

"Mr. Jedder, the pine blister has got into the Endowments. I saw an acre of it back there about a mile."

"That's no news, sonny. I seen it weeks back. What of it?"

"You haven't reported it. Professor Doane was along, you know."

"Uh, that book lumberman!" grumbled the old native. "I tell you you can't tamper with God's creation like these here science fellers from the colleges is tryin to do, without a judgment fallin' on them and their works."

"It will spread and ruin the Endowments, Mr. Jedder."

"Suppose it will. But they ain't nothin' can be done 'bout it. I'm an old woodsman. I tell you the reason they're findin these here new-fangled pests, these college fellers, is to make jobs for themselves. Now ain't it?"

Bert gazed incredulously at the old man.

"I been lumberman over these mountains for years, long before these college fellers was born," declared Jedder. "We didn't have no 'blisters' and 'rusts' and 'worms' before they come. Not as I know it. Our trees were good, healthy trees, then. I know it. I've cut 'em down by the millions. Look at their old dry blood!" He pointed to the mounds of sawdust that surrounded his house on three sides. The old man gave a raspy laugh.

"Now don't you worry none, sonny. I'm going to chop down them dead trees and get 'em out of the way."

"But," protested Bert angrily, "the disease must have been spreading all through the Endowments. Cutting down that acre won't cure it. Mr. Jedder, outside of what you think or don't think, the Endowments mustn't remain in danger like this. We must get to work and prevent the disease from spreading to the other trees."

"How'd you cure it, sonny, if not with the ax blade, I'd like to know? Huh, you're a good one to be tellin' me that should be done 'bout it. Let's hear you say?"

"Plant currant bushes around among the pines, Mr. Jedder."

The old woodsman laughed uproariously.

"Currant bushes!" he gasped. "Currant - - O sonny, you'll be the death of me! Currant bushes!" The old man paused for a minute, and then, continuing his ridicule, he shouted over to the house, "Hey, May!" His wife immediately showed herself at the door. "Here's a youngster wants to go to work servin' currants to pine trees. Says it's a new-fangled way of keeping the blister from the pines. Currant bushes!"

"That's what the Government uses; it's the cure, Mr. Jedder. Professor Doane has been planting currant bushes where the disease has started. I've helped him. He's over in Maine doing it now." Bert was indignant. But he realized that some one had to fight to save the Endowments, or else the stupidity of the old man would ruin them. And if the trees were destroyed, what about the school and hospital over in China?

Two days later, Bert, on his pony, piloted a hurried but thoroughly equipped expedition over Adventure Turnpike. It consisted of a four-horse load of currant bushes, hastily secured from the nurseries, a crew of men with the necessary tools for planting the currant bushes, and a Government forestry expert in charge. With the expedition went also Mr. Barlow's secretary, with full authority to force Jedder to give way. And with the secretary, as the guest of Bert, came the Chinese boy, Ying, to get a glimpse of the Endowments which had meant so much to him.

The Endowments were saved, all but a small patch of them. When Jedder saw that currant bushes had saved from sure death his beloved trees, he told Bert apologetically that he guessed he'd take in a few new ideas more before he died, if they didn't come too fast.

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We next offer for your approval,-

SOME REAL SALES DOPE

As gleaned from copies of the "American Woollen Company Booster"

"An ounce of 'did' is better than a pound of 'going to do'."

"A stumbling block is a stepping stone you tripped over."

"The surest road to advancement is to find a better way of doing the job assigned to you."

"There are timid persons to whom a fly on the window pane becomes a bull in the meadow."

"Don't envy the other fellow, you can do just as well if you want to."

"Perspicacity, perspiration, and perserverance are big words but they can bring still bigger results."

"There is a nicety of difference between discussion and argument. You may preserve harmony and concord in discussion. Argument leads to dispute, contention and controversy."

"Regard, respect and confidence were never won by vulgarity or profanity."

"He is a benefactor of mankind, who makes two grins grow where there was only one grouch before."

"If you have a good aim in life, Shoot."

"NEVER FORGET THAT AMERICAN ENDS IN 'I CAN' !"

"One moment, Please!"

"This completes our broadcast for this period. "The State Leader is indebted to the Massachusetts Blister Rust Control Agent for assistance in furnishing material for this section of the News Letter. "We will be glad to hear from any of our 'listeners-in' who have enjoyed our offerings."

Stations B R E and B R C. "signing-off" at 11:59 $\frac{3}{4}$ Waltham Time;

C. C. P. Announcing. GOOD-NIGHT!

M A G A Z I N E S E C T I O N

A Sales Talk by a Master Salesman.

Mr. Ryan, from the Rose-Kiernan Insurance Company of Albany, spoke very helpfully on selling methods at the New York State Conference. He took the trouble to acquaint himself with the work so that his remarks would apply directly. Notes on his talk follow:

Eliminate yourself and your interest, sell him interest in his property; show him the hole in his pants, not the one in yours. Getting a lead man is good salesmanship, one man sold in a community can be used as a salesman.

The use of a "Silent Salesman" is great. It can be made up of letters of good will, service recommendations, simple figures and facts, and photographs, anything in black and white to support your statements.

Credit giving might apply, that is, giving an owner "credits" such as lowering his cost and giving him better value for removing hazards. The co-operators might be included on an Honor List to be posted publicly.

Insomnia is one of the best assets of a salesman.

Poorest approach is when you don't know anything about the prospect. Always get dope on him first; there are plenty of avenues, the postmaster, storekeeper, one of the other cooperators, neighbor, etc.

A lighted lantern in his barn is like gooseberries in his pines.

Fit the case to the prospect, tailor his suit to fit him.

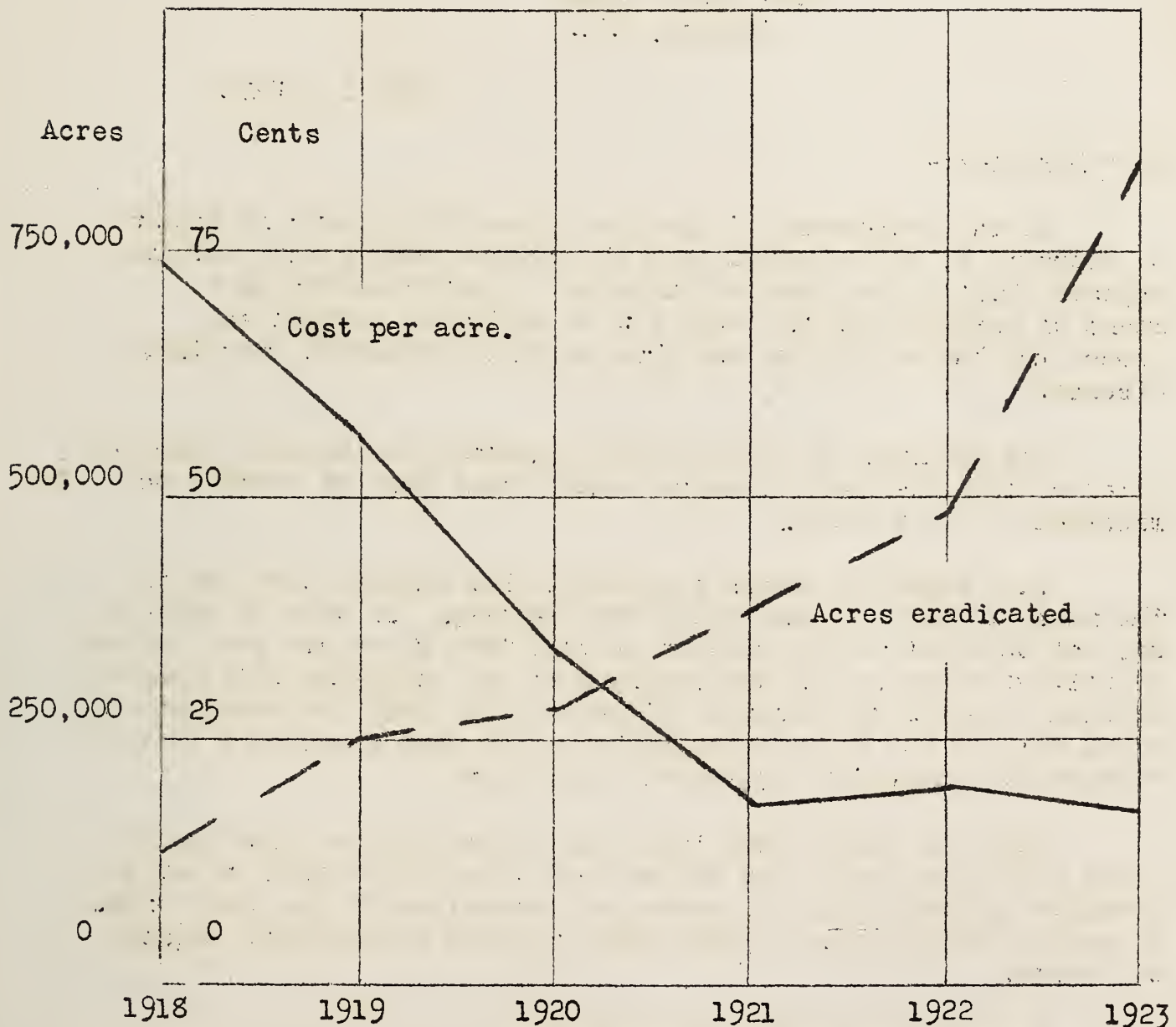
FIRST PLAN YOUR WORK THEN WORK YOUR PLAN.

BLISTER RUST CONTROL

ACRES PROTECTED AND AVERAGE COST PER ACRE

NORTHEASTERN AND LAKE STATES.

1918-1923.



While the acreage protected from the blister rust has risen from 138,938 acres in 1918 to 895,986 acres in 1923, an increase of over 472 per cent, the cost of eradication per acre has decreased from 74 to 18.1 cents.

(Contrast the above graph by Mr. E. R. Ford with the table on Page 13 in the last Blister Rust News. The table is good for giving data but for the public's use a simple graph is better. - Editor)

Practical Cooperation with the County Farm Bureau in New Hampshire.

ROCKINGHAM COUNTY
FARM BUREAU

105 Water Street
Exeter, N.H.

Feb. 12, 1924.

Dear Director:-

At the conference of the Farm Bureau Presidents at Concord on February 1, it was voted that the various county Farm Bureaus support Blister Rust work and urge town appropriations as a means of carrying out the work ie: to eradicate currant and gooseberry bushes whereby our pine would be protected from this disease.

The Chairman of the board of Selectmen has already received a letter from the State Forester asking that such an article be inserted in the warrant.

In a number of cases the article has already been put in the warrant and will come up at Town Meeting. In case an article has not been put in the warrant of your town there are two courses to follow; first see if the Chairman of the selectmen will insert it upon request, and secondly if he does not feel the necessity of doing this to see if it is possible to get such an article in the warrant by getting 10 signers to a petition.

Will you kindly look into this matter in your town and if there is not an article in the warrant take such action as may be possible in furthering the cause and protection of the white pine. By caring for the pine in your town it means an excellent source of revenue.

Thanking you for your cooperation.

Very truly yours,

A. D. Emerson,

President Rockingham County Farm Bureau.

The above has been sent to the Farm Bureau Directors of the different town in the county per order of the County Farm Bureau President.

K. E. Barraclough.

Blister Rust Damage Increasing in New York.

Studies of damage were carried on by Dr. W. S. Snell, assisted by Messrs. Caruthers and Corbett, in the summer of 1923.

"These studies were made on plots one to eight acres in area in different aged stands of white pine, and were confined to Warren County, with the exception of an acre plot in Schoharie County. A total of 15 acres were studied in Warren County. On these plots the white pine trees were counted and each one carefully examined for white pine blister rust. A total of 14,355 trees were counted and examined; 521 trees had been killed by blister rust, 3,922 trees have blister rust. The vast majority of these trees will be dead within ten years. The largest trees that are diseased a 14 inches in diameter, breast high. A total of 691 wild gooseberry bushes were found in these plots. The range in years of the presence of white pine blister rust in these plots is from 8 to 17 years.

"In a plantation of eight acres, where the gooseberry bushes were in fence rows and in the edge of woodland around the plantation, and of which there were 193 bushes, 8.7 per cent of the trees have blister rust. The disease has been in this plantation eight years. In a 12-acre tract of natural stand of white pine, the vast majority of the trees are from 12 to 15 years of age. On a two-acre plot there are 1,000 white pine trees; 97 per cent of these trees have blister rust, and about 80 per cent of them will be dead within five years. There are 174 gooseberry bushes on this plot. Twenty-seven per cent of the entire number of trees examined have blister rust."

(Quoted from the Report of Mr. C. R. Pettis on the White Pine Blister Rust, in the 13th Annual Report of New York Conservation Commission for 1923.)

TOMORROW'S SUCCESS DEPENDS UPON TODAY'S PREPARATION

MOST MEN DO NOT ACCOMPLISH MORE BECAUSE THEY DO NOT ATTEMPT MORE.

The joint appropriations committee of the New York legislature has recommended an appropriation of \$60,000, this being an increase of \$10,000 over last year's appropriation.

Vermont Offers the Following Short Program:

New Commissioner of Forestry

Robert M. Ross has been appointed Commissioner of Forestry and will take active charge April first. Mr. Ross is at present assistant to state forester Hawes of Connecticut and was formerly with Mr. Hawes when the latter was forester for Vermont. Mr. Ross is well acquainted with Vermont conditions and has many friends throughout the state.

Blister Rust Working Plan

Vermont blister rust agents are preparing a working plan for their districts, following roughly an outline prepared by the Montpelier office, which includes all phases of the agent's work. Particular attention is directed toward completing the protective work within the next six years. Accompanying this plan will be a large project map of the district upon which is to be shown by various tints the eradicated areas of different years, those areas where no eradication is needed, and areas yet to be eradicated.

Eradication figures

During the past eradication season, 25,190 acres were covered at a total cost of \$8,498.43, of which \$1,251.09 represents excess labor or cost to the state and \$7,247.34 represents cost to the pine owner, including \$7,050.37 for common labor and \$196.97 for transportation. 278,570 wild and 1,234 cultivated Ribes were removed. The total cost was 33.6 cents per acre.

Cooperative Work

All private cooperation promised for next summer has been secured on the basis of the owner paying all labor costs. This increases the burden on the pine owner by the amount of excess labor previously paid by the state. The latter

now furnishes experience, equipment and supervision only. Cooperation has been somewhat more difficult to obtain under these terms but it is believed that our rates of progress can be maintained after the first shock of these terms has been worn off.

A training course for foremen will be conducted again this season, since last spring it proved so successful.

Most of the Ribes eradication this year will be done by farmers own or hired labor, under the direction of a state foreman. Some state crews will be maintained for the convenience of the pine owners who are unable to furnish help.

Attempts are being made to secure town appropriations in three towns. Only enough money will be asked to pay excess labor, that is all labor costs over a day labor wage.

An assistant to the state leader is to be appointed who will act as a general publicity agent and who will make field studies and do checking.

J. E. Riley, Jr.

HAVE FAITH IN YOUR ABILITY TO WIN. CERTAINTY
OF VICTORY WINS BATTLES BEFORE THEY ARE FOUGHT.

GOOD WORK IS IMPOSSIBLE WITHOUT ENTHUSIASM.

New Hampshire Towns Support the Blister Rust Program,
for 1924.

Eighty-nine Towns Make Appropriations.

We are able to report that 89 towns have appropriated \$36,925.00. In addition to these figures we have yet to hear from quite a large number of towns and we are very certain of appropriations from five cities. The city appropriations, as perhaps you may know, can be made any time during the year, but most of them will undoubtedly take action within the next few weeks.

Record Breaking Appropriation in Chichester.

What was perhaps the biggest surprise of town meeting day was the action taken by the town of Chichester, which is located in Merrimack County. The Forestry Department had recommended an appropriation of \$400.00, but when the matter came up during town meeting there was a strong movement to increase this appropriation, the supporters of Blister Rust work feeling that it would be a wiser policy to appropriate money enough to clean up the town in one year. Consequently, the amount in the warrant was increased and the final vote resulted in an appropriation of \$2,400.00. So far as I am informed, I believe this to be the largest appropriation made for blister rust work in any state on the part of a town or city. The town of Pittsfield, where work has been conducted for two seasons, appropriated the sum of \$2,000 in order that control work might be completed this year.

L. E. Newman.

Observation on Rooting of Ribes After Eradication.

In 1921 Ribes eradication was carried on in Polk County, Wisconsin, two miles south of the Interstate Park at St. Croix Falls. The slope on which the bushes were growing was very steep and had a western exposure. Except at dry times during the summers there was water seepage from the bank. The Ribes were taken up during the last week in August. The work was carried on somewhat hurriedly on account of the shortage of funds, and some of the bushes were not placed in trees as is usually recommended. The Ribes were largely prickly-berried gooseberries (*Ribes cynosbati*) and wild black currant (*R. americanum*). Many of the bushes were very large, being from 4 to 5 feet in height and proportionately widespread. A number of the bushes which were hung up in trees were so heavy because of the dirt around the roots, that they fell to the ground.

In the summer of 1922 this eradication area was inspected by Mr. William Thompson and myself about the first of June, and a considerable number of the gooseberry and currant bushes which were dug up in 1921 were found to have leafed out. Nothing, however, was done with these bushes, but they were left for observation. In 1923, about September 10, I inspected the area again to learn of the condition of the bushes, but failed to find a single one that had taken root or which showed any signs of life. The bushes which had been pulled up and the roots severed completely from the ground in 1921, which showed signs of leaf in 1922, were dead in 1923. However, this does not constitute an argument for leaving pulled bushes lying on the ground. Safety first.

H. J. Ninman, Wisconsin.

- - - - -

Compound Interest and Blister Rust Control.

What is needed to put the proper pep in our work and to enable us to finish what we started namely the completion of our cooperative control program in the northeastern states, is the use of the idea of compound interest.

The work which our men are doing in interviewing pine owners, getting prospects, supervising Ribes eradication and securing pine protection is on the basis of simple interest; that is, it is the interest we, ourselves, are arousing.

Compound interest, however, is worth more in an investment than simple interest, as we all know. Compound interest in blister rust is the use of other organizations as well as our own in assisting the cooperative control program. It is making our efforts bring returns through the sustained interest of others. The multiplication of our effort through better organization and coordination of our work is also compound interest.

In computing the value of interest, it is important to know the rate. Cooperation with few organizations may be likened to securing a low rate of interest; cooperation with many organizations a higher rate of interest. What we want is the largest interest rate possible, commensurate with safety. If, by multiplication of our efforts through other organizations we fail to keep close tab on Ribes eradication work, and allow poor work to be done, then we have made a poor investment and have gone beyond the margin of safety in our interest rate.

The exigencies of the work, and the need for greatly increased Ribes eradication, make it imperative however that we cooperate with as many organizations and individuals as is possible.

Roy G. Pierce.

Minnesota Nurseries Free From Blister Rust.

Prof. A. G. Ruggles, State Entomologist of Minnesota, reports that after a thorough inspection of all the nurseries in his state, none of them showed any signs of blister rust, either on white pine or currants or gooseberries.

This is very encouraging news, since at one time some years ago the blister rust was found in about a half dozen Minnesota nurseries.

- - - - -
Ribes Eradication Around Pines.

Dr. J. F. Martin suggests uniformity of expression in speaking or writing of the width of the protective strip around pine stands. The width should be consistently expressed as 600 to 900 feet, rather than 200 to 300 yards, or 1/5 of a mile. The use of different terms confuses the public even though they all mean the same thing.

- - - - -
EMPLOYEES' COMPENSATION.

Change in Procedure.

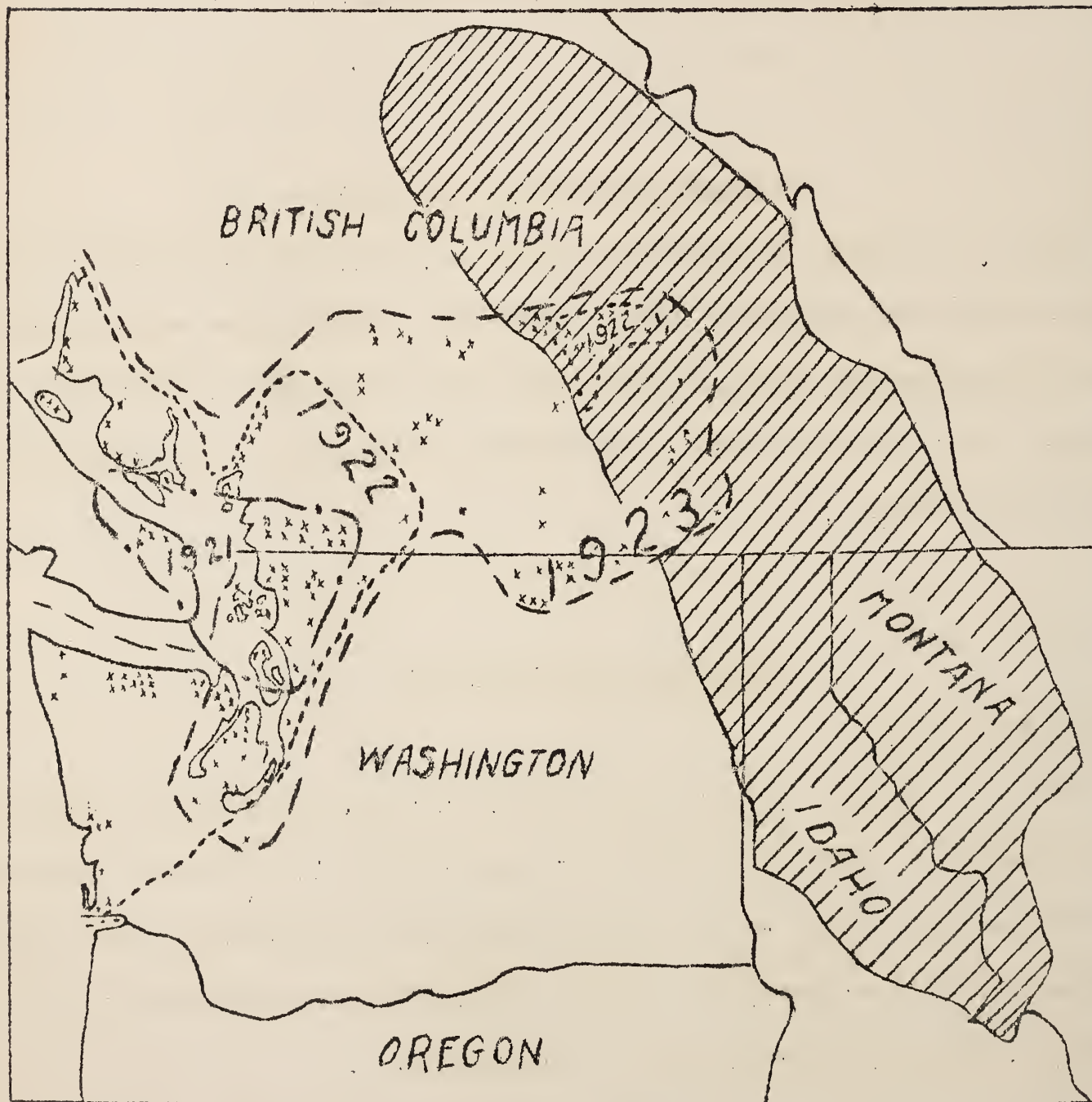
Dr. W. A. Taylor, Chief of the Bureau of Plant Industry, has requested in a memorandum of March 6th, that all papers relative to injury of employees henceforth be sent direct to the Office of Blister Rust Control, where they will be transmitted to the Bureau for action, rather than be sent direct to the Employees' Compensation Commission, as heretofore.

"In the case of injury where an employee is immediately taken to a local hospital or dispensary for treatment, an appropriate form must be filled out and left with the hospital authorities, and a copy of this form should be forwarded to the Office of the Chief of Bureau."

The State Leaders will soon be sent a supply of these forms. They can be secured from your State Leader when needed.

WESTERN STATES

Map Showing the Distribution of Blister Rust
in the Northwest in 1921, 1922 and 1923.



Copied from The Timberman, of January, 1924.

Cross hatched area indicates the heavy growth of western white pine.

xxxx - - Blister rust infections.

WESTERN STATES

The white pines of the west, all of which are susceptible to the white pine blister rust, include seven species:

Sugar Pine - *Pinus lambertiana* Dougl.

Western White Pine - *Pinus monticola* Dougl.

Limber Pine - *Pinus flexilis* James.

White Bark Pine - *Pinus albicaulis* Engelm.

Mexican White Pine - *Pinus strobiformis* Engelm.

Bristle-cone Pine - *Pinus aristata* Engelm.

Foxtail Pine - *Pinus balfouriana* Murr.

The range of this group of pine extends from Montana, South Dakota, Nebraska, Colorado and New Mexico to the Pacific Coast.

Foxtail Pine Tree Found in New Mexico

The foxtail pine tree, known here and there throughout the west, has now been reported as occurring in the Rio Puerco watershed about 80 miles south of Taos, New Mexico. This extends the range of this tree farther westward in northern New Mexico than it has ever before been recorded, announces the U. S. Forest Service.

Yields of Western White Pine.

The Priest River Forest Experiment Station is making an extensive study of the yields of the western white pine in northern Idaho. Five men are employed in this work and permanent sample plots have been established in 30, 40, 60, and 90-year-old stands. In this work all the trees in the plot are tagged, the diameters are measured, and heights are recorded. At periodic intervals all of these trees are to be remeasured and the growth calculated.

From these studies it will be possible to learn the yields that may be secured from the western white pine at different ages and thus furnish a basis for determining a rotation period for cutting the timber most profitably.

- - - - -

Sample Plot Studies in Sugar Pine Region

The United States Forest Service has been making sample plot measurements in second growth in California for the past few years. The idea that the yields of virgin stands in the California pine region cannot be secured from second growth is a fallacy, writes Mr. S. B. Shaw in a recent Service Bulletin.

On an excellent site a stand of sugar pine and white fir 51 years old, with dominant trees as large as 30 inches in diameter and 115 feet high, and with a yield of 75 M per acre, exceeded the best of the surrounding virgin forest.

- - - - -

Q U A R A N T I N E N O T E S

Mr. L. W. Hodgkins reported at Kansas City, Mo. on March 1st, to take up quarantine inspection work. Mr. Hodgkins reports that the shipments of nursery stock are heavier than usual.

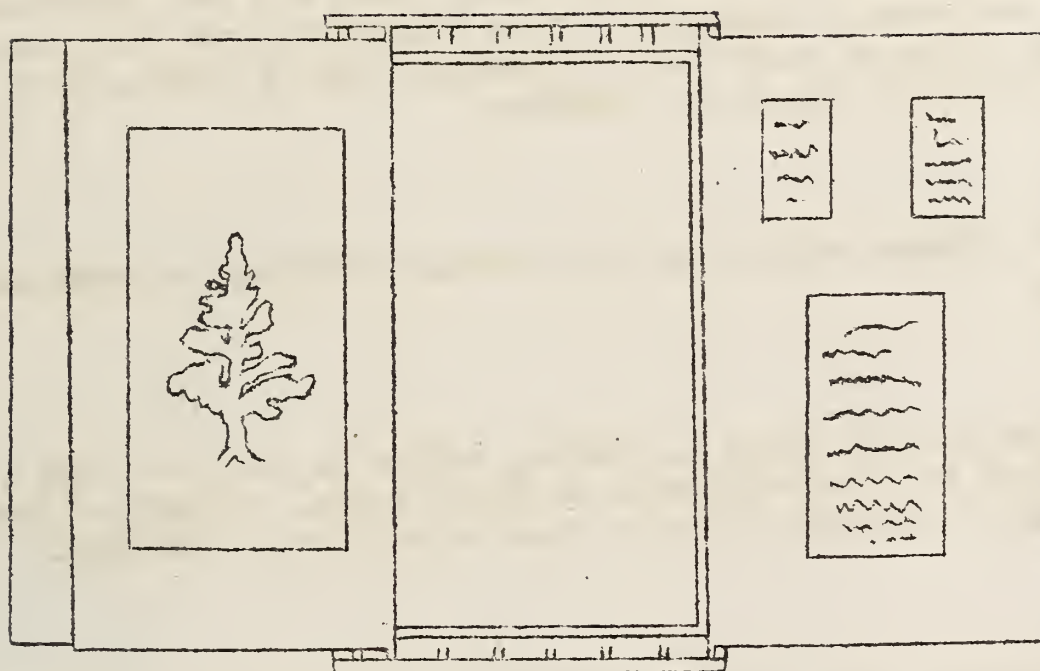
Mr. H. J. Ninman also reported at Kansas City, Mo. for quarantine inspection work about March 7th. He will leave for Omaha about April 1st.

Inspection will also be carried on this year at St. Paul, Sioux City and other points.

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EXHIBIT SECTION

The Wall Display Rack



The Washington Office has a number of these wall racks on hand for distribution. Each of them is fitted with 8 wings of dark gray or dark green mount board. They are suitable for permanent use in your office or for placing temporarily in a library or school for a month or so. The wings can be used to display posters, photos, bulletins, maps, circular letters, etc. Write the Washington office if you want a wall rack sent you.

P E R S O N N E L

Massachusetts

Mr. G. Stanley Doore of Massachusetts believes in preparedness. He writes: "During the summer I realized that the interview work to be really successful required a salesman and with this in mind I am taking a course in advanced salesmanship at night school."

Rhode Island

Mr. Ralph O. Sheals, who has been connected with the Office either as Field Assistant or Collaborator since October 1, 1917, has been temporarily reappointed Field Assistant, appointment to be effective March 5th. He will be stationed at St. Louis on quarantine inspection work at first, later going to Kansas City to work with Mr. L. W. Hodgkins.

Wisconsin

Mr. Herman J. Ninman stopped at the Washington Office en route west from the Boston Meeting.

Washington

Messrs. Hubert Bartow, Cecil H. Hatton, Walter H. Key, and Carl O. Peterson have received their appointments as Field Assts., to take effect March 1st. They will be engaged in quarantine inspection in the West.

Boston Office

Mr. J. L. Richards, who has been connected with blister rust control since December, 1918, sent in his resignation to take effect March 10, 1924. Presumably J. L. will enter commercial work. Good luck to him in his new venture.

Washington Office

Mr. G. B. Posey has been out of the office for the past few days on account of the severe illness of his mother.

Mr. S. B. Detwiler spoke on the Blister Rust Situation in the West, at a meeting of the Washington Section of the Society of American Foresters, on March 7.

Miss Helen L. Tway, dictaphone operator, is resigning on March 22, 1924.

Mrs. E. I. S. Wallis, whose oil paintings of the blister rust have met with so much approval (having been shown at various conferences and meetings throughout the country) was recently extended an invitation to exhibit at The Arts Club of the District of Columbia on May 17. She will show her paintings of fruits, grasses and the blister rust, and will give a talk on her work.

Mr. A. E. Hill, Chairman of the Committee of the American Association of Nurserymen, which cooperated with the Department in putting out the Digest of Laws and Quarantines on Nursery Stock, called at the Washington Office last week.

Mr. H. J. Clark of Chicago, representing the Grand Trunk Lines Committee comprising the railroads of the middle and far West, also called at the Office and conferred with Mr. Detwiler and Miss Thompson concerning the compilation of laws and quarantines relating to shipment of plants and plant products.

C O M M E N T S

Philip W. Ayers. The News for February 15th I have read with keen interest. It helps to keep up enthusiasm in the minds of those who are not employed in the field.

W. J. Endersbee. The New York number of the News Letter is a pippin, contains real ideas, worth-while suggestions and the arrangement is such that one has to read it.

P U B L I C A T I O N S

Anon. Report of Proceedings. Meeting of Foresters, Western White Pine Blister Rust Conference. Held in Spokane, Washington Jan. 7 and 8, 1924. 59 pages. Mimeographed - Office of Blister Rust Control.

Anon. "California Studies Rust Problem." The Timberman, Portland, Oregon, Vol. 25, No. 3, p. 54, Jan. 1924.

Anon. "Conference on Blister Rust Control", Held at Spokane, Wash. Jan. 7 and 8 1924. The Timberman, Portland, Oregon, Vol. 25, No. 3, p. 54, Jan. 1924.

Anon. "White Pine Blister Rust and Insect Control", p. 40. Resolution on Blister Rust Control, p. 52. Forestry Industry Conference and Thirteenth Annual Meeting of the Western Forestry and Conservation Association. Lumber World Review, Chicago, Vol. 45, No. 12, Dec. 25, 1923.

Moir, W. Stuart. White Pine Blister Rust in Western Europe. Bul. 1186, U. S. Dept. of Agriculture. Bibliography of 44 citations.

Note!! If this bulletin has not yet been received by the readers of this News Letter, drop a card to the Office of Blister Rust Control, Washington, D. C. requesting a copy.

Pettis, C. R. White Pine Blister Rust in New York in 1923. An excellent summary of the year's work appears in the 13th Annual Report of the N. Y. Conservation Commission for 1923, pages 170-178.

Eradication work on privately owned land was carried out in 16 counties, the area protected being 9,863 acres, while on state land work was carried on in 7 counties, covering 5,212 acres.

Reynolds, B. A. (Tampa, Florida). Campaign Against White Pine Blister Rust May Save Future California Millions.

"If we should have a 25% loss of pine timber within the next six years, what would be the effect on the price of lumber."

The Fruitman (San Francisco, California) Vol. 3, No. 11. Nov. 1923, p. 5, 11, 12.

EDITOR'S PAGE

Stories Are Better Salesmen Than Sermons.

By "stories" we refer to practical examples that should be followed. The advantage of examples over sermons, in putting across an idea, are:-

1. More palatable, more apt to be taken.
2. Easier to digest.
3. More nourishing, fact rather than theory.

A sermon may be a commandment or an unclothed suggestion.

A good example is a tactfully-clothed hint.

Brother Perry makes an important statement in his announcements. Referring to the restoration of the blister rust item in full, in the Massachusetts budget, he says, "It also indicates, we believe, that the work on the firing line is gradually sifting back to headquarters and that's what counts!" Fuel for the Blister Rust Control machine, in the form of funds, depends largely on how much of the work on the firing line is "sifting back to headquarters". Full and correct records are direct means of its getting there, and contacts with pine owners in your district furnish an important indirect channel. Success or failure in securing cooperative Blister Rust control funds in your state depends very much on your field accomplishments, your reports, and upon the contacts that you make.

In looking over the material sent in by you fellows which has not got a place in the Blister Rust News, we notice the predominance of one reason for which side tracked. Altho the copy is good from a forestry standpoint, and is of use in Blister Rust Control work, it does not show this connection with our work clearly enough. As our work is that of Blister Rust control, not general forestry, our writings must be consistent in regards to this point. Don't fail to tie in with the BRC station!

Help Make the Dollars Go Farther.

They say George Washington was able to throw a dollar across the Rappahannock River because a dollar went farther in those days than now.

The Secretary of Agriculture has for the past several years been urging the practice of economies and good results have been secured in many lines of work. It is to the interest of the public whom we serve, and who foot the bills, that funds expended in blister, rust control and other projects be made to go as far as possible. Numerous small economies were effected by many of our blister, rust force, which aggregated in excess of \$10,000 for the last fiscal year.

It will reflect credit on our Office if savings by any of the force are noted by the field men and specific figures given when the report is called for this year. No saving is too small to be thus noted if it is a real economy and does not save at the expense of effective accomplishment. General Daves made a hero of the janitor who saved a broom. You can save the cost of many brooms by well planned travel. Tell us about your savings and we will pass the good word on up the line.

POLITICAL ACTIVITY.
WARNING TO EMPLOYEES

.....
.....
COMPETITIVE EMPLOYEES, WHILE RETAINING THE RIGHT TO VOTE AND TO EXPRESS PRIVATELY THEIR OPINIONS ON POLITICAL SUBJECTS; ARE FORBIDDEN TO TAKE AN ACTIVE PART IN POLITICAL MANAGEMENT OR IN POLITICAL CAMPAIGNS. THIS ALSO APPLIES TO TEMPORARY EMPLOYEES, EMPLOYEES ON LEAVE OF ABSENCE WITH OR WITHOUT PAY, SUBSTITUTES, AND LABORERS. POLITICAL ACTIVITY IN CITY, COUNTY, STATE OR NATIONAL ELECTIONS, WHETHER PRIMARY OR REGULAR, OR IN BEHALF OF ANY PARTY OR CANDIDATE, OR ANY MEASURE TO BE VOTED UPON, IS PROHIBITED.

Employees are accountable for political activity by persons other than themselves, including wives or husbands, if, in fact, the employees are thus accomplishing by collusion and indirection what they may not lawfully do directly and openly. Political activity, in fact, regardless of the methods or means used by the employee, constitutes the violation.

POLITICAL ASSESSMENTS, SOLICITATIONS AND DISCRIMINATION

Sections 118, 119, 120, and 121 of the Criminal Code (see 35 Stat., 1110) provide that no legislative, executive, or judicial officer or employee shall solicit or be concerned in soliciting or receiving any money or contribution for political purposes from any other officer or employee of the Government; that no solicitation or receipt of political assessments shall be made by any person in any room or building occupied in the discharge of official duties by any officer or employee of the United States; that no officer or employee shall be discharged or demoted for refusing to make any contribution for political purposes; and that no officer or employee of the Government shall directly or indirectly give or hand over to any other officer or employee in the service of the United States or to any Member or Delegate to Congress any money or other valuable thing for the promotion of any political object whatever.

Section 122^w of the Criminal Code provides that whoever shall violate any provision of the four sections shall be fined not more than \$5,000, or imprisoned not more than three years, or both.

IT IS THE DUTY OF ANY PERSON HAVING KNOWLEDGE OF THE VIOLATION OF ANY OF THE FOREGOING PROVISIONS OF THE CIVIL SERVICE RULES OR CRIMINAL CODE TO SUBMIT THE FACTS TO THE U. S. CIVIL SERVICE COMMISSION, WASHINGTON, D. C.

U. S. CIVIL SERVICE COMMISSION.

Form 1982
Feb., 1924.

At the request of the Civil Service Commission the above is published for the information and guidance of all employees of the Department of Agriculture.

Mar. 5, 1924.

HENRY C. WALLACE,
Secretary of Agriculture.

Boston Conference

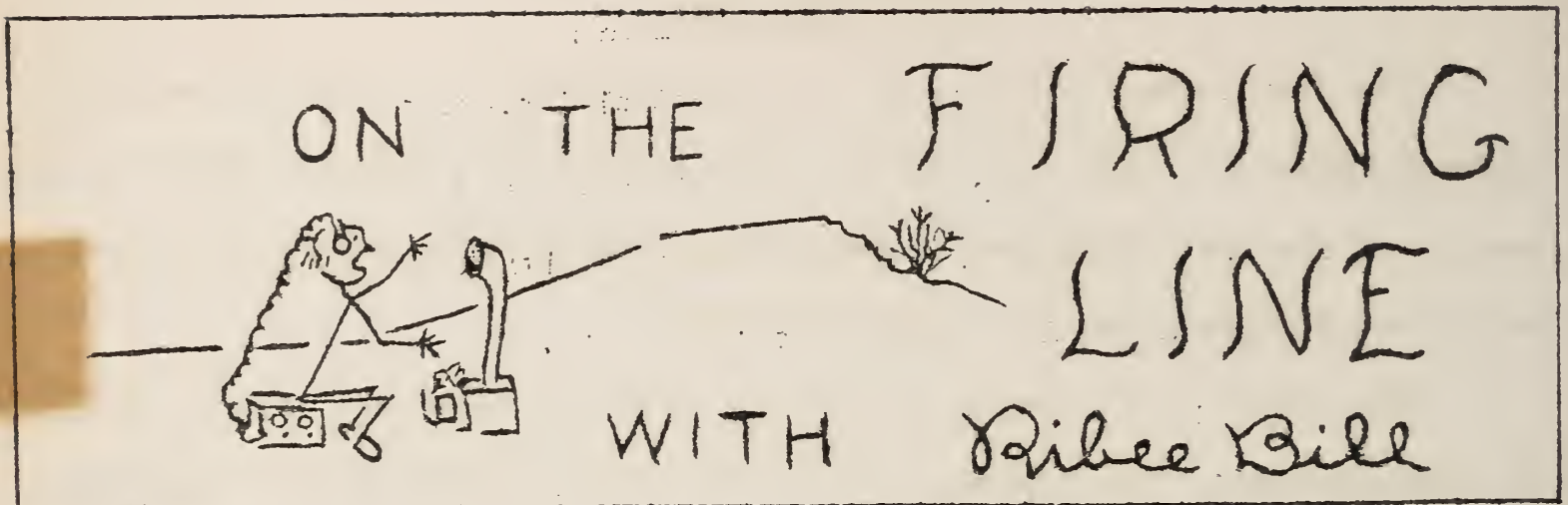
The Ninth Annual Blister Rust Control Conference was held at Boston on February 18 and 19, 1924. All of the State Leaders were present, together with several of the state foresters collaborating with us in blister rust control, and representatives from the Washington Office.

The report of the Conference is now being assembled and will be distributed when completed. The keynote of the Conference is found in the Program as "Targets", which is quoted in full:

"We have a big problem before us in our eight year cooperative blister rust control program in the Northeastern States. Prior to 1922, control measures were applied on 1,300,000 acres. In 1922, the first year under this program, control measures were applied on 481,000 acres. In 1923, the second year, control measures were applied on 882,000 acres. By 1930 we must secure the application of control measures for the first time on 5,500,000 acres and in addition rework 3,500,000 acres or a total of 9,000,000 acres. This is an average of 1,500,000 acres for each of the remaining six years of the cooperative control program. To accomplish this great task we must carefully review our cooperative program and make a detailed plan of work for each State. The purpose of our conference this year is a round table discussion looking toward the immediate preparation and execution of the most practical and productive plans ever formulated in cooperative blister rust control work, to the end, that our goal of 1,500,000 acres in 1924 will be realized.

LEAVE OF ABSENCE TAKEN WHILE TRAVELING AWAY FROM HEADQUARTERS

Blister rust men are reminded that leave of absence while traveling away from headquarters on official business should be applied for on a special form and must be approved by the Chief of the Bureau of Plant Industry before such leave is begun. The application must be submitted in sufficient time to allow for this. The State Leaders will be supplied with the necessary forms on which such applications must be made.



E. J. McN. got off easy for leaving his credentials in the office. We learned our lesson once while out hunting when a game warden asked for our hunting license, which happened to be in another coat. That ten dollars would have bought a lot of ammunition.

- - - - -

"At Chester Center, Mass., the 1384 pines on a quarter acre were examined, and 907, or over 65%, of them were found dead or dying from Blister Rust." Such definite figures secured within your district serve you as important talking points, and the area examined makes a good place for field demonstrations of damage and disease. Have you such figures in your district? If not, why dont you locate one or two areas for such studies and call on the State Leader for assistance in securing the data.

- - - - -

One Agent, at least, is determined to improve his personal equipment for the work he is doing, by attending night school. We have noticed that others, not so fortunately situated in regards to evening sessions of some school, are frequent visitors at the public libraries, where they find many books on salesmanship, advertising, public speaking, and forestry. A man who has stopped growing mentally, has reached his maximum point of production.

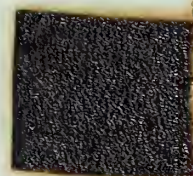
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We get a lot of official correspondence, circulars, bulletins, mimeographed sheets, and the like, which is hastily read, and quite easy to pigeonhole and store away. Did you get your copy of Moir's bulletin on "White Pine Blister Rust in Western Europe"? Please dont file that yet.

If Spaulding's bulletin is the Blister Rust Bible, and it is, then this one by Mr. Moir is our Book of Hymns.

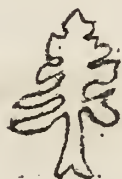
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Massachusetts broadcast has come in clearly and is exceptionally good. Congratulations to you Bay State fellows, on this interesting performance. Dont forget we are always tuned in on you, and that your sending license is not limited to this one month.





BLISTER RUST NEWS



MAY 1 1924

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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry
Washington, D. C.

THE BLISTER RUST NEWS

Issued by the Office of Blister Rust Control,
and Cooperating States.
Vol. 8, No. 3.

MAINE NUMBER

MAY 1, 1924.

"Why, hello there, Agent!

Didn't expect to see you peering around the muddy windshield of that lizzie. - - - Yep! I just crawled thru along this road; its ruts, mudholes, washouts, ditches, and more mud, low gear all the way. Lucky to get thru, but I've decided I can never get back that way. How's the piece you came up? What! You decided the same thing about the other way?! - - - Well, no use fretting on an empty stomach, bring your lunch over, Agent, and I'll dig out my sandwiches too.

"Yes sir! This surely is some mud season. Looks like there are going to be plenty of wet swamps for the crews this year, if this weather is any sample. How many crews are you starting? - - - Golly, they will keep you humping, alright! - - - Yes, I mean seeing that good work is done. Have you definite plans for a thorough checking system? Quite essential, I think, as long as we are each held responsible for all the work in our respective districts. Several Agents, I've noticed, have a pretty definite checking policy. They personally run strip checks thru every area eradicated, and in case of extensive areas, thru every block that is worked. Strips are not very wide, five to twenty feet, depending on how far he can see, but they ramble all over, thru the likely-Ribes places and here and there across the few-Ribes types. Gives the fellow efficiency figures for every job, brings up the weak points of the eradication force so that they may be overcome, keeps the crews on their mettle, and gives the Agent the necessary background for OK-ing the work. Must make the pine owner more confident in the work too, to know that the Agent approves of it only after a careful personal examination. Good idea, this definite checking policy - gives others faith in us and our work. - - -

"No, thanks, I've had plenty - won't you eat this doughnut? I'll guarantee the dough was rolled on a good old New England white Pine board. You know, Agent, if we were to dig into the minor uses of this wood, we would find a wealth of good publicity leads. Take that bread board, for instance, light, strong, odorless, and tasteless, no other native wood would do so well. And the doughnuts that have been made on it! Good? I'll say so! You must have at least one old lady in your district who is known for the good doughnuts she makes - your district wouldn't be in New England or New York if you hadn't. Suppose she has a white pine board to roll the dough on - she would be tickled pink to let you write up her doughnuts and bread board for the local paper. And who would ever dream that it was connected with blister rust control until after the article had aroused interest and curiosity?

"From the standpoint of getting the pine owners' attention we could not have a much better message than white pine protection, because it is so admirably and easily fitted by innumerable "dresses" of apparently strange, but attractive, design. What we must do is become better dressmakers. Don't let it wear the same clothes too often, Agent, the first time makes the list.

"Hold that match, please, my pipe's gone dead. Pretty bad when we get so interested we can't keep the stoves going along with the conversation. Say, that was a good article you had in the last Blister Rust News - the fellows are surely putting their shoulders to the wheel in this matter, fine thing! The Exhibit Section is taking like hot cakes. Leader of State of Maine, Jack Frost, has made plans to set up a tombstone in Portland on the old exhibit ground, while in New York, Doc York used one at the Albany Exposition a couple weeks back and Sherm Fogg, up in Warren County, built one for a window exhibit. But that is only one exhibit idea, and we need a lot more -- seems as if you should give the rest of us the dope on what plans you have worked out.

"Well, Agent, the pipe's smoked out, and I must be on my way. Glad to have run into you, but may the next time see less mud in attendance. I'm going to try to make the road right ahead, which way are you churning? -- Ahead? -- Good enough! Good luck, Agent, see you in the next News."

1.9 2 4 in Maine

If appearances count for anything 1924 will be a big year in Maine, the biggest yet. More towns have appropriated than ever before, in fact 10 more than in 1923, and 41 more than in 1922. Some increase in two seasons. (Guess this can be worked into an argument for a larger State appropriation next winter.)

The following figures show the increase in B. R. Control working under a policy that says, "that the State, with such Federal and Town aid as may be available, will handle the necessary educational scouting, and supervisory work, but that the actual eradication of Ribes must be done by the private owner at his own expense."

	1922	1923	1924
No. Towns Cooperating	8	39	44 Known -5 Pending Total - 49 or 50
Amt. Town Appropriations	\$1,300.00	\$7,115.00	\$7,247.80 Known 1,500.00 pending Total, approx.\$8,700.00
No. Owners Cooperating	464	1148	
No. Ribes destroyed	442,999	1,221,375	
No. Acres eradicated	190,209	336,452	

At this rate of speed we should enter the 400,000 acre class this season.

Our four Blister Rust Control Agents report the following 1924

town appropriations for their respective Counties:

Agt. Kimball	:	Agt. Tarbox	:	Agt. Curtis	:	Agt. Conner
Twin Counties	:	York Co.	:	Oxford Co.	:	Cumberland Co.
10 Towns	:	15 Towns	:	10 Towns	:	9 Towns
\$1,572.80	:	\$2,425.00	:	\$1,450.00	:	\$1,800.00
2 cities pending	:	1 city pending	:		:	2 towns pending

A Total of 44 towns - \$7,247.80 - 5 towns pending

(the 80¢ is part of funds left over from 1923)

The time is rapidly approaching in Maine when the "saturation point" will be reached - that is, there is a limit beyond which we cannot stretch the State appropriation of \$5,000. To make further gains in progress we must have more funds to work with, and, as next year is Legislature year, we hope the public and legislature will realize the need of prompt blister rust protection strongly enough to provide adequate funds for rapidly pushing the work forward. With the great increase in the number of towns appropriating, and the many hundreds of private owners doing control work, and who no doubt wish to see the work continued at a faster pace, it would seem that an increase was about due. It is only a matter of collecting and presenting the facts in the case so that the emergency will be properly understood by the people. If they appreciate the necessity for prompt control of the rust, they will provide sufficient funds to do the work.

W. O. FROST.

One Maine Agent wants 100 of the \$1,000 Reward posters. They made a hit, evidently.

LIVE NEWS FROM VERMONT

Commissioner of Forestry Robert M. Ross assumed office April first, succeeding Mr. W. G. Hastings, who resigned to go with the Income Tax Division of the U. S. Treasury Department at Washington. Mr. Ross comes to Vermont from the Connecticut State Forest Service, where he has acted as assistant to the State Forester. Previous to his services in Connecticut, Mr. Ross was employed in the Vermont Forestry Department with headquarters in Burlington and his many friends there and throughout the state welcome him back as head of the Vermont Forest Service. Mr. Ross will collaborate with the Bureau of Plant Industry on the Blister Rust Control work in Vermont.

A meeting of Vermont Blister Rust Agents was held in Montpelier, April 8 and 9, to discuss plans for the coming eradication season and to perfect arrangements for the annual training of foremen. The training will be given during the first week in May providing field conditions permit.

Our hopes for an early season and open roads had a setback early this month, when nine or ten inches of snow fell. We have an ambitious program for this year and are anxious to get off to a good start. Hence, just now we are existing in the depths of despondency. If old "sol" comes out of hiding and does its duty by the time this issue goes to print, we will be chirping merrily. Winter makes us temperamental.

P. H. Teachout, a former blister rust man, has been assigned by the Forester to fire control work and will have general supervision of the field work this year.

J. W. Porter, who was formerly a foreman and mapper in blister rust work has been given charge of shipping at the state nursery at Essex Junction.

P. H. Merrill, now at Yale making a special study of the reproduction of hemlock in hardwood regions of southern New England, will come to Vermont as assistant to Mr. Ross May first. Perry Merrill was our agent in charge of the Rutland district during the latter part of the winter and early summer of last year.

An applicant for a B. R. job writes agent Curtis of Maine as follows:

"Dear Sir: When I was talking to a friend about a job this summer he referred me to you. I would like a job on pine blister if you have one open. I am some experienced in this line as I helped trim a pine lot last summer."

Yours truly

Page this man at once. No blisters open, however.

Here's another, from a college man too.

February 26, 1924.

W. O. Frost,
Augusta, Maine.

Dear Sir:

"I am seeking work this summer and am interested somewhat in Forestry. Have you any positions open to a college man who has had considerable camping experience and who is willing to rough it? I couldn't stand very much heavy work as I want to be in condition to take up my studies in the fall. I hope you will consider me if any positions are available."

Sincerely,

Wonder if this chap's nickname is "Tessie"!

Western News

Spring quarantine inspection work has been under way in the West since March 1. Inspectors are being maintained at Seattle, Tacoma, Pasco and Spokane, Washington, and Pendleton and Portland, Oregon. During March 6 violations of Federal Quarantine 54, and 4 violations of Washington State Quarantine No. 7 were intercepted. Two of these shipments consisted of white pines and 8 of Ribes.

With prospects favorable for an early spring, field work in the West will be started on June 15, so far as funds are available. Cultivated black currant eradication will be carried on in cooperation with the States in 7 counties of California, 10 counties of Idaho, 7 counties of Montana, 10 counties of Oregon, and 7 counties of Washington. If funds are available during the coming fiscal year a local control project will be carried on in the northern part of the Kaniksu National Forest, Idaho. Control reconnaissance will also be done on the lands of each of the 5 fire protective associations of northern Idaho.

Notification has recently been received of the finding of pine infection near Quilcene, on the Olympic Peninsula, Washington, by Mr. H. N. Putnam. While numerous wild and cultivated Ribes have been found in western Washington, since 1921, pine infection has heretofore been found only on two small pine trees in a nursery at Mt. Vernon, Washington.

COOPERATIVE WORK APPRECIATED

Orono, Maine,
March 14, 1924.

Mr. W. O. Frost,
Assistant Pathologist,
Augusta, Maine.

Dear Mr. Frost:

I have read your report on the Cooperative White Pine Blister Rust Control Work in the State of Maine for the year 1923 with great interest. It shows that the work here has been carried on with marked success and with increasing interest on the part of the general public.

The fact that funds for cooperating in this work have been secured by appropriations from so many of the towns seems to me to indicate not only that your organization has been active and successful but also that there is an increased appreciation throughout the State of the danger of this disease. It also shows that your work in the past, in and near these towns, has given good results, otherwise such appropriations would have been difficult if not impossible to secure.

It is especially gratifying to note that such a large area has been covered at a comparatively low cost per acre and that so many of the obnoxious currant and gooseberry bushes have been removed during the past year. These, at least, will cease to be a menace to our growing crop of white pine.

It is the intention of the Extension Service to encourage this work in every way practicable and you can count on our support and cooperation for increasingly, encouraging results for the current year.

Very truly yours,

Signed (Leon S. Merrill)

Director, Extension Service.

COOPERATION WITH THE FARM BUREAU

Mr. K. E. Barraclough, of Rockingham County, N. H. made an interesting report of his work to the County Farm Bureau last winter. Extracts from this report follow:

The Farm Woodlot as a Crop That Needs to be Cared For.

A large percent of the land acreage in the county is capable of producing only wood. The total land acreage is 308,954 acres. Of this 21,872 acres is merchantable timber, 102,878 acres valuable young growth, 184,204 acres waste land, and 121,379 acres improved land.

From tables that have been published by the State Forestry Department, a man that holds an acre of good growing pine over a period of 40 years, after paying all taxes and interest charges, the profit would be \$5.93 per acre for each of the 40 years. However, it is a different story to hold an acre of waste land. Say that unproductive land is assessed \$5.00 per acre and is taxed at the rate of 2-1/2 per cent on the valuation. If held over a period of 40 years without yielding returns, results in an average loss of \$1.22 per acre for each of the 40 years, because of the taxes and interest on the land value.

At the present time timber in the U. S. is being used 4 times as fast as it is being grown. In 1907 the average price of pine stumpage in Central New England was \$5.00 per M feet, while in 1923 stumpage for second growth White Pine averages between \$10.00 and \$12.00 per M feet. Undoubtedly, this increase in the value of Pine stumpage will continue. Especially since a large number of the southern mills which now supply considerable portion of our timber will be closed in ten years. The bulk of the supply will then come from the west coast. With these facts in mind, I do not believe that it can be put too strongly that the farm woodlot needs to be taken care of.

To care for a Farm woodlot so as to obtain the greatest yield in stumpage and in dollars and cents is a problem that every woodlot owner is obliged to consider. Woodlot management is young and there is a great deal to be learned. No hard and fast rules can be laid down. However, there are a few general principles that can be followed and if carried out are sure to be of benefit to the owner.

When a stand of pine is cut see to it that seed trees enough are left for reproduction. This problem is up to the owner not the operator.

When you sell a stand of pine know the amount of stumpage that you have. The buyer is sure not to overestimate your stand.

Thin out hardwood from young pine growth. Often fire wood obtained will pay for the cost of doing this.

When a stand of pine is well along thin out the inferior trees and give the healthy trees a chance. A couple of such thinnings over the period of the development of the pine stand will not only increase the final value of the stand but the lumber obtained from the thinnings will net a profit to the owner if done correctly.

Interest in the Farm Woodlot During the Past Year.

Nine woodlot demonstrations were held in the county during the past year. These meetings were held in cooperation with the State Forestry Department. Woodlot management was one of the problems taken up at each of the three Farmers Institutes held last winter. At the several Blister Rust Talks given in the County during the past year the woodlot problem was discussed. Numerous pine owners throughout the County, realizing the value of pine, are cutting out the hardwood and are doing some thinning. A few calls have come in at the Farm Bureau office asking for information in regard to estimating the stumpage of pine growth.

The Boy Scouts in the county have been active in forestry work. Field trips have been taken with the Portsmouth and Derry Boy Scouts. One trip was taken with the scouts at the summer camp at Raymond. Boys from all over the county were represented at this camp. The boys take a keen interest in woodcraft and tree diseases. The Boy Scouts of Derry planted 300 pines last spring.

There seems to be a keener interest in a forestry program this coming year. At the 15 planning meetings held to date, woodlot demonstrations have been asked in 14 of the towns.

Work Accomplished in Blister Rust Control During 1923.

The facts relating to the nature and destructiveness of the disease White Pine Blister Rust, have been published far and wide. I will not discuss the point here only to say that the disease is just as serious as stated, and that the method of control has proven practical.

The best way to finance the removal of currant and gooseberry bushes within a township, I believe, is through town appropriations and private appropriations where conditions warrant. The state increases town appropriations 25% of the amount appropriated, and private appropriations 20% of the total cost of the project undertaken. In cooperation with a town that appropriates, the state places men in the town trained to spot currant and gooseberry bushes, and a definite area is covered in a systematic way. The State Forestry Department suggests an appropriation of \$400.00. In this way a township is covered in a period of 3 years or so depending upon the size of the town. The Blister Rust Agent in the County has charge of the work and is responsible to the selectmen in the town where work is being done.

There was an increase in eradication work done in the county this year over last. Nine towns made appropriations, Nottingham, Epping, Chester, Londonderry, Salem, Plaistow, Exeter, Raymond, and Portsmouth. This made a total of \$3,050.00 increased 25% by the state

or \$3,815.51 available in town appropriations .26 private owners in the county appropriated a total of \$1,362.00. This amount was increased 20% of the total cost of each project undertaken. The total amount spent in the county for eradication work was \$5,277.55. 391,888 wild and cultivated currant and gooseberry bushes were removed from an area covering 31,463 acres. The average cost per acre of this work figures \$0.167 per acre.

In conclusion I might say that the woodlot is important and necessary to the average New England farmer. The importance of the woodlot in the economic life of the farmer grants it care and protection.

Town Appropriations.

After the blister rust agent has succeeded in getting his yearly report in to the Chief's office, his next immediate task is to begin active work toward getting a program of work prepared for the coming season. Inasmuch as the winter months comprise a slack season in so far as field work is concerned, it is the agent's business to reach as many people as possible with the blister rust story while he is waiting for good weather.

There are many ways in which agents may cause pine owners to become better acquainted with pine protection methods. Different agents will oftentimes achieve the same end by the use of different methods. Each must study his territory carefully, try to sense the general attitude of the people, and plan his course of action accordingly.

Many agents and leaders lay much stress upon the value of illustrated lectures, and obtaining cooperation through those committees and groups which function under the General leadership of the County Agricultural Agent. In York County during the past winter a system has been used which differs rather radically from that outlined above. The policy here has been what might be called a "direct from Agent to pine owner" affair with no attempt to work through any established organization.

The main points of interest in this system are that practically every pine owner in any given town is reached by mail, and that most of the Agent's work is done in his office. This results in lessening the cost of the work.

This campaign has evidently produced good results. Seventeen towns have been heard from at this time. Of the seventeen, fourteen towns have raised money for control work during the coming summer. Eight of these fourteen towns are ones that voted money in 1923, and six of them are new to the work. No town in which control work was done last year failed to reappropriate this spring.

Copies of the form letters used are shown below.

E. Tarbox--Agent, York County.

COOPERATIVE LETTER-HEAD.

Sanford, Maine.

February

1924.

Dear Sir:

You were one of the many pine owners through York County who have cooperated in destroying currant and gooseberry bushes, and thus protected your white pine from the Blister Rust. We thank you for assisting in checking the spread of this disease.

There are other pine owners in South Berwick who have not yet received assistance in removing currant and gooseberry bushes from their property; so the town is being asked to make another appropriation at the coming town meeting. By making this appropriation your town will again receive State and Federal help. So much progress has been made thus far in destroying the currant and gooseberry bushes that we expect to complete work in your town during the next summer.

Inasmuch as the control of Blister Rust is a problem which deeply concerns every owner of white pine, you are respectfully asked to give the Blister Rust Article in your town warrant careful attention.

Respectfully yours,

Blister Rust Agent for York County.

Sanford, Maine.

February

1924.

Dear Sir:

At the coming town meeting in one of the articles in the warrant will ask that the town cooperate with the State and Federal Governments, and raise a sum of money for the control of White Pine Blister Rust. The amount of money recommended for the town to raise is not large; not over two hundred and fifty dollars. It will be to assist pine owners in destroying currant and gooseberry bushes on their property. The average town can be completely gone over in two or three years.

Last summer twelve towns in York County raised money for Blister Rust Control. Over one hundred thousand acres of land were gone over, and approximately four hundred thousand currant and gooseberry bushes destroyed. At the end of each summer's work in any town the selectmen are furnished with a complete report showing how much money was spent; what work was done, and the area in town where work was completed. The results are printed in the town report, and displayed in public places. In this way any voter may assure himself that town, State and Federal money are being well spent, and that results are being secured.

The Pine Blister Rust is spreading rapidly wherever currant and gooseberry bushes are found. The best authorities in the country say that in time either the white pine or currant and gooseberry bushes must go. They cannot for long occupy the same ground. Consider what white pine has meant to the prosperity and well being of your community, and then decide that your town will help maintain this prosperity by assisting in controlling Blister Rust. Every year of delay helps make a bad situation worse.

You may possibly own white pine and yet not be familiar with the Blister Rust. If the town cooperates with the State and Federal Governments; your property will be examined by a competent man both for Blister Rust, and for currant and gooseberry bushes. The town will furnish a man who will help you destroy the bushes; provided any are found. In case the town does not cooperate, and you would like your property looked over; I would be glad to call on you free of charge, whenever time permits. A card mailed to Sanford will reach me.

Sincerely yours,

Blister Rust Agent for York County.

Sanford, Maine,
February
1924.

Dear Sir:

The town of Berwick in which you live cooperated with the State and Federal governments in the control of White Pine Blister Rust during 1923 by appropriating money in town meeting last spring. Many pine owners received assistance in destroying the currant and gooseberry bushes on their property, and many others received the benefit of having their land examined by an expert.

There are parts of your town where no work has yet been done, and where the property owners have received no help. You may be one of these owners, and can easily tell by examining the Blister Rust Map which is hung in your local Post Office.

So much progress has been made thus far in destroying the currant and gooseberry bushes, that we confidently expect to be able to complete work in your town during the coming summer, and to this end the town will once more be asked to appropriate a sum of money for Blister Rust Control.

Inasmuch as the control of this disease is a problem which deeply concerns every owner of white pine, you are respectfully asked to give the Blister Rust Article in your town warrant careful attention.

Respectfully yours,

Blister Rust Agent for York County.

GOOD CAMPAIGN PHILOSOPHY

A Hen Does Not Stop Scratching Because Worms Are Scarce.

When the worm crop is below par, Mrs. Hen goes right on scratching. In fact she scratches hard and longer and deeper than ever. Take a tip from the lowly hen. When cooperators come harder, go after them harder.

Don't wait. Start now, and keep it going.

REMEMBER THE HEN.

W. O. Frost.

DUTIES AND PLANS OF AN AGENT BETWEEN TOWN

MEETINGS AND ERADICATION SEASON

Formulation of plans for control work in any town awaits the town meeting which decides whether or not the town will appropriate cooperative funds for the work.

The period following town meeting must be utilized by the agent to formulate his plans for eradication work in each town so that when the field season arrives he will be all ready to start the work with a "boom", and not be handicapped by needless delays. The question of scouts should be discussed between the Agent and his State Leader, they should be engaged as early as possible so that they will be ready to report for duty when notified. The Agent's maps which are used by the scouts must be put into shape before the field work begins.

Conference between the Agent and each respective Board of Selectmen must be held whereupon the selection of town foreman, and laying off certain definite areas within the towns which are to be eradicated may be discussed and agreed upon.

Securing suitable boarding places for the scouts, within the eradication area of each Town, if attended to previous to the field season will eliminate considerable delay and confusion.

Roadside demonstration areas should be selected and made conspicuous through posters, signs, markers, etc.; fruiting specimens collected for fair exhibits, window displays, in fact any such ideas which will bring home to the public the seriousness of this disease.

After the results of our Town Meetings are known, and the area to be eradicated this season are designated, the Agent could do intensive educational work such as interviewing prospective cooperators, explaining and demonstrating Blister Rust in advance of his scouts.

All in all, I believe there is much to be accomplished previous to our field season which under favorable conditions is usually between the first and middle of May, and, as a matter of fact, the whole success of our field season may depend on the proper utilization of our time preceeding the eradication work.

Agent Kimball, Maine.

Once a scout called at a certain house where evidently the people were not of the English speaking type. After a ten minute discourse on blister rust by the agent, the lady suddenly glanced at the front room mantel and said, "it's half past two".

G. H. Kimball, Androscoggin -Sagadahoc Co's.

<p>- GOAL SET - ANDROSCOGGIN-SAGADAHOC COUNTIES, ME. COMPRISING TWENTY-FOUR TOWNS TO BE FINISHED 1927.</p>

Ten years ago who would have thought that the lovely currant worm, which eats the leaves to the midrib would be white pine's best friend today. (Boston Herald editorial of recent date.)

Mr. W. B. Deering, of Hollis, Maine, whose pine lots were the subject of a story by Austin Cary in the January issue of the Journal of Forestry, is a strong booster for blister rust. Mr. Deering was largely instrumental in securing a town appropriation of \$200.00 in Hollis for work in 1924.

Agent Tarbox had 16 out of 19 towns appropriate Blister Rust funds with only 5 days spent in the field. Read his account of the educational methods which brought these results.

The spread of blister rust shows that before long the Bay State and all New England will have to make choice between white pines and currant bushes. Boston Herald, March 3, 1924.

Town Meeting and Blister Rust Supporters.

An article appearing in the Portland, Maine Sunday Telegram, of March 16, entitled "A New England Town Meeting", emphasizes the value of our cause of a firm believer in white pine. Find the friends of white pine and get them working against currants and gooseberries. As this town, Wells, voted for a B. R. appropriation after the article had been "indefinitely postponed", this tale shows what a B. R. supporter can do at a town meeting. The B.R. article was No. 37, and up to the time of its reading the meeting had been a tame affair, but when the Blister Rust article was brought up the fireworks started with a bang.

The following clipping contains a bit of meat that may be filling to some of the other agents:

Up to this time the famous oratory for which the town of Wells is somewhat noted was entirely absent. In fact the writer was partly induced to attend the meeting from information that oratory at a Wells town meeting ran as freely as water down hill, and he remarked to a citizen who sat by his side, "Where are the orators?"

"Oh, wait," the other replied, "The meeting is not half through yet. There is tripp, he hasn't said anything yet, but if he doesn't like some of the recommendations of the Budget Committee he will say so. The chances are that he won't like everything they advise and I guess you will hear him if you wait."

I waited, and was not disappointed.

It was when they reached the article concerning the raising of money to co-operate with the state and national government to eradicate the pine tree blister which has appeared in the town. The spokesman for the committee said the committee opposed the measure and moved the indefinite postponement of the article. The motion was seconded by another of the committee. Then Mr. Tripp (William M., I think is his name, and who used to be chairman of the board of municipal officers) took the floor, and for a while we had a little of the old-fashioned New England Town Meeting.

The crowd seemed to like to hear Mr. Tripp, for they listened attentively to what he said. He reasoned that the business of eradicating the pine tree blister was a true policy of conservation of a natural resource, as important to Wells as the waterpower of Maine was to the State (evidently Mr. Tripp is a believer in Gov. Baxter's policy regarding Maine's water powder). "The pine tree blister is with us. It is not a theory but a condition. If the condition is allowed to go on unchecked our young pines will die. If the young pines die what is to replace our pine forests now being so rapidly depleted under modern methods of lumbering? The citizen's owning pine wooded land will suffer loss of property as real as money in the bank, and the town will lose money in future taxes by reason of the loss the citizen's property." Mr. Tripp won his point. The recommendation of the Committee to refuse to act agreeably to the article, although the committee persistently argued in favor of their report, was voted down, and the town voted to co-operate with the government and voted the money for the purpose.

Facts Each Blister Rust Control Agent
Should Compile for Daily Use in His District.

by

A. E. Fivaz.

District Facts.

Number of district, and size (length and width approx, in miles).

Names of counties, area of these, population, general notes on the woodland area, cultivated, waste and other types, reforestation possibilities and needs, location of woodland and type of woodland, (general).

Number and kind of local woodusing industries, especially those using white pine.

List the towns of the district, giving for each, the total number of white pine owners as obtained from the assessment rolls and assessors, along with the total acreage in white pine in each town, and the average holding per white pine owner.

Amount of B.R. in district, location of infection areas, extent and intensity of the damage, general Ribes conditions thruout the district.

General notes on the people, attitude towards white pine and B.R.C. occupation and wealth.

Past Work and Present Status.

General eudcational work, writeup and project map record of past work, and write-up of what needs to be done or emphasized.

List of towns, giving totals for each as follows:

Town	: No. Pine	:	:No.Pine	:Acres:	No. Pine	:	:No. Pine	:
	: owners	:	:Acres:owners	:erad.:	:owners	:	:Acres :owners	: Acres
	:interviewed	:	:have erad:	:	:interv'd.:	:	:not	:
	:	:	:	:	:but not	:	:interv'd	:
	:	:	:	:	:eradic.	:	:	:
	:	:	:	:	:	:	:	:

List of cost of eradication by year, giving average as well as highest and lowest, for each year.

Materials, Organizations, Agencies.

Cooperation with Co. Agr. Agent, office facilities, status of cooperation and needs.

List of newspapers of district, as well as of outside ones coming in, giving name of paper, kind of paper, name editor, address, frequency, circulation (amt., where, class people, etc.)

List of fairs in or influencing district, location, time, attendance, and kind of publicity possible.

Public spirited organizations of district, what, location, membership, activities, influence.

Write-up of accessibility of all parts of the district, by railroads, trolley, waterways, roads, etc.

List of high schools of district, and number of public schools. (rural)

List of libraries of district.

Equipment for work, including information, materials, etc. and needs.

Records, present status and needs, including maps.

A TYPICAL DAY FOR A MAINE AGENT

- 6:30 Alarm clock sounds reville. Agents gets ready for breakfast in a half hour.
- 7:00 Breakfast followed by a short smoke.
- 7:30 Gets lunch, throws bag into car and is off for Gorham, 12 miles.
- 7:45 Sees elderly man ahead, walking and carrying a heavy bag. Man looks like tramp; black slouch hat full of holes, coat ragged, pants patched in several places and wearing old rubber boots. Gives man a ride. Turns out to be largest pine owner in Gorham---never can tell by the looks. Man much opposed to blister rust work; all a blamed graft, just gives somebody a soft job at the farmers expense. The only blisters he has are on his hands; got 'em by hard work and he is blamed positive that no Government man will ever have any in the same place.
- 7:50 Overtakes B.R. scout but he refuses to ride as he was just going to jump the fence into the woods. Lot belongs to above mentioned/owner who decides to go along and have a look at one of them bugs'. Agent also goes along.
- 8:30 Scout finds heavy infection on young pine growth in NE corner of lot. Many small trees dead, numerous limb infections on larger neighboring trees. Ribes scarce but heavily infected.
- 9:00 Owner wants to look over adjoining lot which he also owns but before starting suggests that they have a smoke. Is informed that blister rust men in this county do not smoke in the woods; however, that does not stop him. Scout goes into next lot, owner smokes and agent pumps him full of blister rust.
- 10:15 Still pumping when scout returns from adjoining lot and says there are no Ribes there. Owner sees the advantage of a scouting system and beings to get interested. With the aid of the scout's map, owner designates his holdings and wants scout to let him know what he finds.
- 10:30 Owner returns to road and agent spends remainder of forenoon working with scout.
- 12:00 Lunch and smoke at agents car.
- 12:30 Agent leaves for Standish to check private crew. 6 miles.
- 1:00 Found crew, five men and foreman, just starting strip. Worked with crew for an hour and then checked on previous work.
- 3:00 Agent leaves for Harrison. 34 miles.
- 4:15 Arrives Harrison. Calls on chairman of Selectmen, shows him map and discusses work with him. Buys gas and oil.
- 4:45 Leaves for house where the Harrison scout boards. 4 miles.
- 5:00 Arrives house, make arrangements for night and prepared for supper.

6:00 Supper. Scout arrives.

7:00 Agent and scout go to see town foreman. 1 mile. Spend evening going over maps and records and checking up out of town owners.

9:00 Return to house. General conversation on piazza.

9:30 Taps.

S. D. Conner,
Cumberland Co., Me.

One Month's Work.

In addition to the regular monthly report Form BRE 2, the Massachusetts Agents have been requested to submit a brief list of definite accomplishments of the month which cannot be expressed in cold figures. The following is a sample submitted by one Agent for the month of March.

Posters relative to restrictions on planting of Ribes, placed in every Post-office in the district and in some of the railroad stations and electric railway waiting rooms.

Interviewed selectmen of seven towns.

Sent out circular letters and return cards to non-resident land owners - 62% of the cards returned with replies.

Attended two conferences at the office of the County Extension Service for the purpose of obtaining increased cooperation.

Interviewed the Editors of all the local papers in the County and received promises of support and cooperation from them all.

Examined 14 woodlots in search of pine infection.

Examined 2 Town Forest areas - found blister rust.

Examined 2 locations where owners had requested permission to set out cultivated Ribes.

Assisted County Agricultural Agent of County where there is no blister rust agent. Visited pine owners with him and made inspection of pine lot for blister rust infection.

C. C. Perry - Massachusetts.

CHECKING OUR WORK.

The subject of checking has been discussed many, many times and it is right and proper that it should be because it is one of the most important parts of our work.

I think we are all agreed on this point but as to the manner of making these checks and tabulating our results we are of many minds. Some believe in advance plots, others checks behind the crew while still others advocate strip line checks. Whatever way we do it, we arrive at some percentage of the efficiency of our work. But what does this represent? Does it give a true account of our work? Does it tell us that we have done a small area well and that we can say that all our work measures up to this standard? Or should we take a broader view and base our figures on the number of Ribes left per acre?

Personally I am not in favor of the advance plot method. I do not believe it is possible to make an accurate count of the Ribes if they are at all abundant. The advance plot is necessarily small and often does not give a true reflection of the work of the crew or the area as a whole. Then too, it is very difficult to lay out such an area with any exact bounds without the foreman or crew being aware of it.

The check strip seems fairer in many ways but it, too, has its disadvantages. Unless we lay out definite lines we cannot arrive at any true estimate of the area of the ground covered on which to base our calculation. Unless we know our ground very well we may not pick out a strip that will give a fair average of the lot worked. In spite of these short comings I am inclined to favor the strip method and to base the efficiency of our work on the number of Ribes left per acre.

As said above I do not favor the advance plot. Checking the strip directly back of the crew is much better but here we run into two other difficulties. The crew is more apt to be on the job if the "boss" is around and then it is hard to make any accurate estimate of the acreage covered. If a foreman runs checks with his crew his estimate of the acreage covered is apt to be very inaccurate. However, I would not recommend that the foreman should not run checks because what he does run are helpful to him as an indication of what his crew is doing, and serve also to key up the members of the crew.

I do not think it is enough to say that because we had an advance plot or ran a check behind the crew and because so many Ribes were removed in the first place and so many more on the check that our work was therefore 90%, 95% or 99% efficient. Let us suppose we are working in a district where Ribes are very abundant. Suppose we should remove 1000 Skunk Currants from a quarter acre plot ^{and} on checking back we should find ten more. We could then justly say that we were doing very fine work with a bush efficiency of 99%. On the other hand we were leaving forty Ribes to the acre which of course is far too high a percentage.

Therefore it seems to me that the true estimate of our work should be based on the number of Ribes left per acre and that this can be best determined by running a check strip of definite size in such a manner as to cover all types of land in the whole area worked.

R. W. Merrick, Massachusetts.

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Merrick has the correct viewpoint. In the past, unbelievers had to be convinced that we could find and destroy the Ribes. Our work has proved this beyond question. The real purpose of checking is to assure protection to the pine, which depends on freedom from Ribes. Checking should tell us how many Ribes are left after eradication, what species, how large are they and to what extent are they screened? Were bushes removed so as to prevent sprouts from the crown, and were they hung up so well that they will not fall to the ground and continue their growth? The checking should be thoroughly representative of Ribes conditions on the control area, and should constitute a record that will be of value in indicating the time when the ground should be worked again

Mr. Carter, of the U. S. Forest Service, suggests the term "Ribes repression" as a more accurate description of our work than "Ribes eradication". The checking record should be such as to give assurance that we are actually accomplishing repression of the Ribes.

S. B. Detwiler.

"BLISTER RUST IN THE PUBLIC SCHOOLS" by P. K. Miller in the February issue of the Blister Rust News, contained much valuable and useful information. The public schools are one of our best assets for disseminating knowledge of the disease, because what the "Youngsters" hear in the schoolroom is often discussed at the supper table, or during the evening, and is more than likely to create an impression with the "Old Folks", and start them thinking.

At one of my town meetings, one man wanted to "know something about this Blister Rust" before action was taken. A school girl immediately stood up and said, "I don't own any white pine but I know a bit about Blister Rust, as we have discussed it in school," and in a short convincing talk she told what she knew about the disease. The town appropriated for control work.

Agt. Kimball, Maine.

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One more way to advertise B. R. - "Come on, Blister Rust, Clean'em up", was often the cry when Frost was bowling in the State House League this winter. His team won the cup.

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The Portland Maine Exhibit

So much has been said about the Portland Blister Rust exhibit that I have decided to try to reproduce it on paper. It may help somebody, but as to being anything out of the ordinary I can't see it. The chief reason it attracted so much attention was due to its location; it couldn't have been in a better one. Permission was given to use one of the half dozen large windows in the Maine Publicity Bureau, situated right in the heart of Portland, at the junction of three streets, Longfellow Square, just opposite Longfellow's monument. The office has a corner location, is long and narrow, and is decorated profusely with Maine wild life and sportsmen's paradise advertisements. All of the other windows contained pictures and stuffed mounts of bird, animal, and fish life, and, believe me, it is good, especially during the summer months, although it is a year round publicity service.

The B. R. window is over 6 feet in width and more than that high, and has a wide window seat, - just the thing for display purposes.

As the illustration shows materials used for the exhibit, I will not go into details as all of you are familiar with them. (If your imagination is keen enough, perhaps you may be able to make out what it was all about.)

I find that large infected trunks, good big sticks, eight inches in diameter or better and six foot in height are bound to attract attention, for it is merchantable stuff that 99% of the pine owners are anxious about. However, it is always advisable that smaller specimens are included.

Will say right here, however, that I did some sweating wrestling those 2 - 8" x 7' specimens from the woods to their position in this window. Also that I feared for the safety of that plate glass window, but it was worth the sweat and fear.

This exhibit was so arranged that "those on the outside looking in", as well as those "on the inside looking out" had blister rust brought to their attention. In other words, it was "two-faced". This was accomplished by pasting photographs on the backs of two wings taken from that old wooden case used a few years back, and by pasting two large posters back to back, and by proper spacing of specimens.

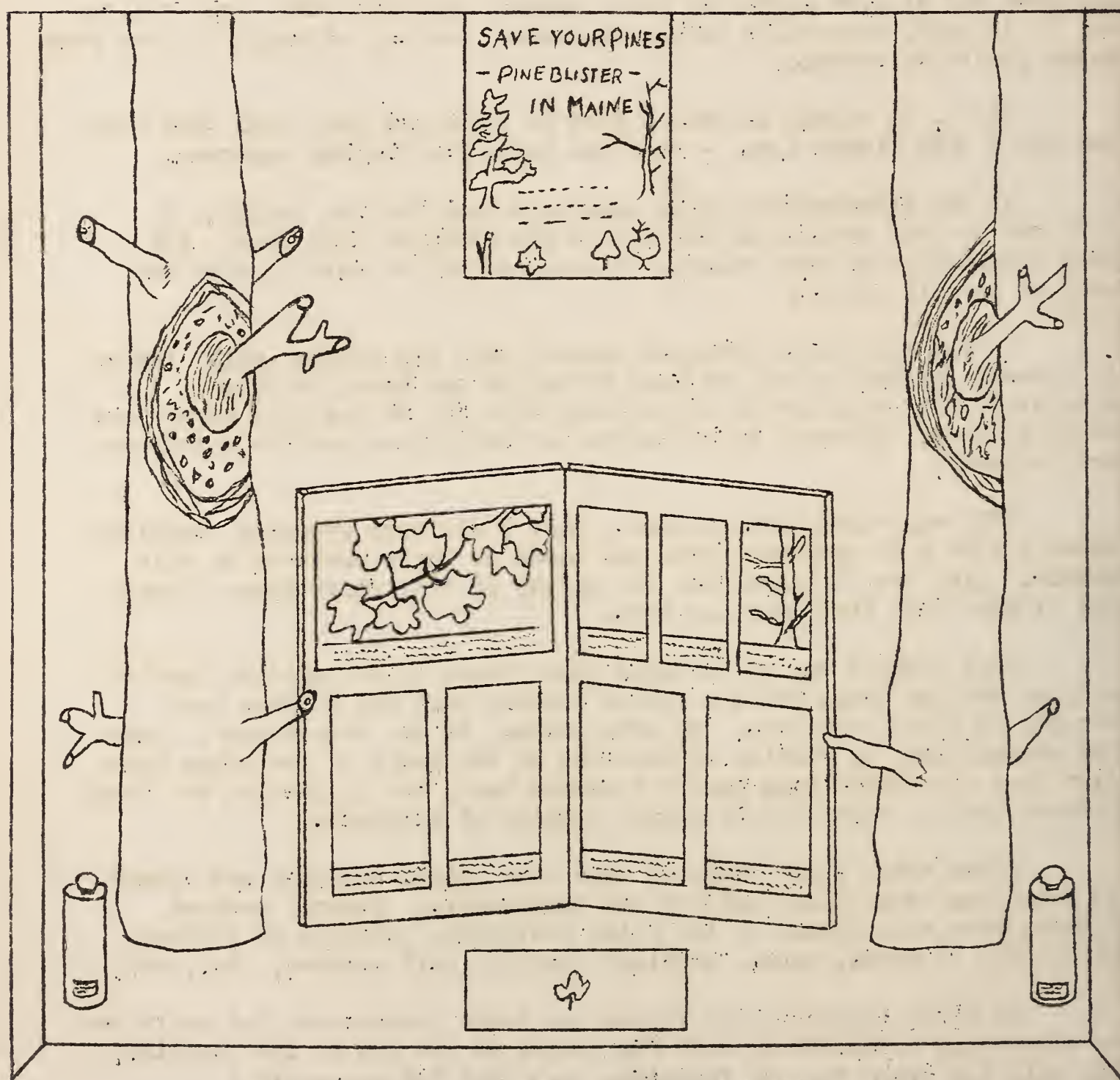
Three "Jack Frost folders" were also pasted together and placed in front near the glass, telling the whole story. Several hundred folders were also placed in the files containing hundreds of folders pertaining to camps, roads, hunting, fishing, golf courses, etc., etc.

My first intention was to use the large wooden case but as it was so clumsy and so daubed up with fly specks it was out of the question. (To tell the truth the man in charge would not let me use it.)

Although this exhibit met with the approval of most people, there were a few who were not so favorably impressed. For instance, I heard one of a group of spectators say, - "Ain't that a _____ of a thing to advertise. They must be proud of it. Advertising we have such a pest - humph

Always somebody taking the "blis" out of blister rust.

FROST



New Exhibit Ideas Successful.

The Place - State Armory, Albany, N.Y.

The Occasion - The Fourth Annual Industrial Exposition of Merchants and Manufacturers, an advertising proposition.

The Time - April 5 to 12, inclusive, afternoon and evening.

The Results - About 50,000 persons saw the Blister Rust and Reforesting exhibit, and the men in charge interviewed over 2,000 individuals. Fourteen pine owners asked for inspection, seven land owners requested examination of proposed reforestation areas, and many tree order blanks were distributed. Several hundred "Jack Frost" folders were placed in the hands of interested parties. Many people who "did not know the state and federal government was doing so much for forestry" became firm friends of and believers in the work.

The Exhibit - The Blister Rust and Reforestation booth and the adjacent Gypsy Moth booth were the only strictly educational exhibits in the building, and were placed there by the Conservation Commission as an experiment. The "high spots" of the Blister Rust and Reforestation Exhibit are listed below:

1. Booth square, ten feet on a side, wall one side, railing on other three, two sides on aisles (corner booth). Decorated with white paper.
2. Posters and mounted Ribes specimens on wall. Signs over both booths "Conservation Commission", "Controlling Forest Enemies - Insects - Fungi", "Reforestation is a Profitable Business", large diseased specimens of white pine inside booth.
3. Life-history-of-disease unit made up of long box in which was planted a fresh-fruiting canker (growth of aecia "forced" in water), and infected Ribes bush (made up from preserved stems), and a young, healthy pine tree, arrows showing direction of spread of disease. Box overshadowed by large tombstone, with skull and crossbones and legend "Blister Rust Kills White Pine Trees".
4. Remedy unit consisted of large wallboard bottle with legend "The Remedy - Remove all Currant and Gooseberry Bushes Within 900 Feet of White Pine Trees", picture of eradication crew with subtitle "Eradication Crew Applying the Remedy for Blister Rust."
5. Riker mounts of transplants of the three pine species, surmounted by large section of white pine tree showing growth rings and smaller sections of younger trees.
6. Nursery unit, consisting of four steps of three boxes each. First three boxes with cones and seed, next with one year old

seedlings, then two year old seedlings, then three year transplants, each of white pine, Norway spruce and red pine. Backed by artistic sign with legend in rustic style, "26 Million Babies Like These are Growing in the State Nursery, Saratoga Springs. Largest Forest Nursery in America. You can buy them for \$2.00 to \$4.00 per 1,000. Plant them on idle and waste land, and help build homes for your Own Babies."

7. These units were arranged along the rail of booth on the two sides next to aisles, at table height.

A. E. FIVAZ

TAKING ADVANTAGE OF AN OPPORTUNITY

Mr. T. J. King, of Merrimack County, N. H. stopped over night in the town of Andover where a home talent play was being staged. Mr. King attended and got permission to speak for 15 minutes on blister rust. Nearly 300 people were present. The following day while returning to headquarters he passed an auction sale at which over 100 people were present. He was able here to talk for 15 minutes again and in addition persuaded the auctioneer to give a talk on the disease. This agent took advantage of opportunities.

W. J. Endersbee.

Agent Kimball, of Androscoggin and Sagadahoc Counties, Maine, finds it necessary to use the French newspapers to reach some of his pine owners, as shown by a recent clipping sent in to the Washington Office from "The Messenger", Lewiston, Me. Good work Kimball. When in Rome do as the Romans do.

SAVING OUR BEST SPECIMENS

E. W. Littlefield, Forester, assisting in scientific investigations, has for the past two weeks been covering with wire screen blister rust infections on trunks of large infected white pine. Each fall and winter mice and other rodents destroy these cankers which makes them useless for exhibition purposes. The Albany office is using such specimens to build up a complete blister rust exhibit in the Commission's main office.

From N. Y. Conservation Commission, News Letter.

Suggestions for Bringing Out Striking Contrasts
in Blister Rust Photographs.

"I sympathize with you on this matter of photography of the white pine blister rust. I think most of it is punk. This summer I tried to get up to Littleton and take some pictures that showed the different shades of foliage of the blister rust, but altho I had my car there, I could not find the time to do so, and I am sorry. I am sure that I can show those contrasts and they ought to go well for publicity purposes.

"For those pictures, panchromatic films or plates and filter screens are necessary. For the yellow and orange discolorations, the yellow K3 filter of Eastman's will do; altho the orange one (which is lettered G, I believe) would give more contrast. For the light reddish colorations, use the Red A filter - that is the one I used to get the red contrast against the dark green of the healthy tree. For the brand of plate, I used the Wratten and Wainwright Panchromatic Plate, but now I am using Eastman's Panchromatic film. I use nothing but films now - the cut film like plates, not the roll film.

"If you use a red filter, it is going to make the sky appear black on the print. Hence, it is better to get some clouds in if you can - that lighten up the sky and leaves it white at least partially. You will note that I did that in the picture you mention. The red overemphasizes the blueness of the sky, making it black instead of blue in tone."

Dr. Walter H. Snell
Brown University.

GOOD POINTS ARE BROUGHT OUT IN THIS PROGRAM

EUREKA GRANGE FORESTRY MEETING

On Monday Evening, March 3rd, 1924, - at 8 o'clock
in
Barney Hall, Grafton, N.H.

* * * *

This meeting is to be held under the auspices of the Eureka Grange, in cooperation with the State Forestry Department. While the evening will be given over to the following subjects, there will also be an opportunity to discuss any other matters pertaining to farm woodlots which those present may be interested in

PROGRAM

Introductory Remarks: Dr. L. E. Tuttle, Chairman

Is Your Woodlot Producing All The Revenue It Can?

Mr. J. M. Corliss, Forestry Commissioner,

Progress of Blister Rust Control in Grafton.

Mr. John M. Phillips, Chairman, Board of Selectmen.

The Seriousness of Blister Rust.

Mr. L. E. Newman, Federal Agent, in charge of
Blister Rust Control.

Town Cooperation in Blister Rust Control.

Mr. G. F. Richardson, Jr., Blister Rust Agent in
Southern Grafton County.

Questions & General Discussion: Led by Dr. Tuttle

* * * *

This meeting is being held for your benefit. It will be to your advantage to attend. Others have found these meetings to be worth while.

Don't Come Alone! Bring Your Family & Neighbors Along.

Everybody Welcome and Cordially Invited.

Box 211, Lebanon, N.H.

G. F. Richardson, Jr., Blister Rust
Agent, Southern Grafton County

Note. Not only are the State Leader and the Agent on the program, but also one of the cooperators. On account of the inclusion of Mr. Corliss' paper on Woodlot Forestry, the program has a wider appeal than one on Blister Rust alone.

Editor.

- USE OF LANTERN SLIDES IN OXFORD COUNTY -

During the past winter months I have given many illustrated talks in my County. I used sixty-five colored Blister Rust and Forestry slides, showing the early spring stage of BLISTER RUST on pines, the late summer stage on Ribes, methods used to control BLISTER RUST, pine plantations of varying ages, the correct method of thinning, the great dangers of forest fires and slides on general forestry subjects. One minute talks were given with each slide.

Most of my talks were held in conjunction with the County Farm Bureau Planning meetings, and by the way, Oxford County had the largest average attendance at these meetings of any county in Maine this year.

Every one in the audience had the privilege of asking questions as each slide was shown. This method gave them the chance to clear up, by personal questioning, any points pertaining to the White Pine Blister Rust that they had not clearly understood.

In encouraging the protection and conservation of our forests, these slides are essential in showing just how the blister rust damage occurs, and the methods that must be used to remedy these conditions. Slides also make a talk more attractive and interesting, they keep the audience interested in what the speaker is explaining. When it is possible to obtain local pictures for these slides, by all means do so, as they can bring home the truths about our pine forests to the audience better than anything else.

There is great opportunity in Oxford County to get material for these slides. Oxford County has excellent natural pine reproductions from one year to one hundred and fifty years old. Oxford County pine owners are cooperating splendidly in seeing that the pines of their County are protected from the Blister Rust.

D. S. Curtis,

Oxford County, Maine.

One Editor's Comment on "Foreign" vs "Home" News

THE LEWISTON DAILY SUN

Lewiston, Maine

Editorial Department

My observation is that people pay very little attention to stories of infections that have been found off in some section remote from them. They have heard all sorts of "stories from the west". What they will read and listen to is something that happens right in their own township.

In the town meetings in this State that I have attended the voters have been willing to "hold up their hands until counted" to raise money for White Pine Blister Rust control when they hear about an infection that is on their own land or nearby.

V. W. Carham,

Agricultural Editor

Agent Kimball asked this editor's advice regarding Blister Rust news items and received the above.

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Another Blister Ruster is practicing what he preaches. Bill Endersbee is planting 10,000 white pines this spring. Bill already has 10,000 planted and says they are the best argument he has in answer to questions if it is safe to plant white pine because of blister rust. His pines are protected from the disease.

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Tom King claims the record for the largest town appropriation. One of his towns voted \$2400 to clean the town this year. Another town voted \$2000 to complete the work there this year.

Agent Barraclough has secured the first town appropriation to be used entirely for re-eradication of Ribes.

WHAT YOU MIGHT CALL GETTING SOMETHING FOR NOTHING.

The following ADD appeared in the HAVERHILL, MASS. EVENING GAZETTE of Thursday, March 13, 1924.

FARMERS AND WHITE PINE
OWNERS

an invitation is hereby extended you
to come into our store

FRIDAY THE 14th!
TOMORROW

WILLIAM T. ROOP

Essex County Federal Agent for Blister Rust Control, will be here all day to show you how to SAVE YOUR WHITE PINE CROP. IMMEDIATE ACTION IS NECESSARY to protect our pines from BLISTER RUST!

NOTHING TO SELL! NO OBLIGATIONS!
JUST VALUABLE FREE SERVICE AND ADVICE.

We have given the free use of our show window and store for you. Come in and see if the government can help you!

HANSCOM HARDWARE COMPANY
Tel. 48 30 Main St. Tel. 49

SOME SUGGESTIONS
for
Newspaper Publicity in Blister Rust Work.

(1) People have explicit faith and confidence in their local leaders. This is due chiefly to the fact that they have known them for years and feel that what they champion is for the good of the particular community concerned. For this reason it would be advisable to get local leaders to sponsor certain statements as to why the blister rust campaign should be unanimously entered into. This could be done by putting words into the local leader's mouth. In other words have him give a statement to the press embodying the material sent out from the Department.

(2) Another effective way would be to have local people of prominence who have entered in this campaign give a statement telling why they did so and pointing out why their individual efforts will not be effective unless everybody in the community takes part. In this connection it would be well to cite the names of the people concerned.

(3) In carrying a campaign to a new county it should be effective to tell with what success the work has been accomplished in other counties, giving these counties by name and telling the details of how the organization was carried on and how it was received. Such an effort should tend to arouse community and local pride with the ultimate effect that the county would show greater interest in getting behind such a campaign.

F. M. Russell,
In Charge Press Service,
U. S. Dept. of Agriculture.

Local Cooperation in Worcester County, Mass.

This winter has been very good compared with last year but there have been many days when you could not get out. These days I have used in writing to the out of town owners of land in the towns where we are to work next season. These owners are scattered from Maine to California and you would be surprised to see their interest in our work.

To date I have secured cooperation amounting to just over 7400 acres and the best part of it is that everything is down in black and white. This does not include several hundred acres of reforested land now under control of the State Department of Conservation as per our State law but which the original owners want eradicated. This is something I will have to take up later with Mr. Cook.

R. W. Merrick.

Overcoming a Grievance

It is interesting to note how an experience that individuals may have had with one state department affects their attitude toward all work performed by public agencies. This was strikingly illustrated last summer by work which was attempted in Massachusetts, in the vicinity of one of the reservations which supplies water to the Metropolitan District (Boston and vicinity).

This area is located in central Worcester County and is known as the Wachusett Water Reservation and consists of several thousand acres. When the state condemned this land the entire population of the town of Old Boylston had to move to higher ground. The few small manufacturing industries ceased, the railroad was torn up, and a large cemetery had to be moved to a new location. The fact that the people were compelled to abandon the area has been, and still is, a grievance which they hold against the state or any employee of the state.

It became necessary at the very start of the Ribes eradication work in the immediate zone of the reservation to convince the inhabitants that the white pine blister rust control work had no connection with the Metropolitan Reservation and that privately owned pine was entitled to the same protection as that given to pine owned by the state. When these points were satisfactorily explained and it was conceded to the private owner that perhaps he deserved some sympathy, the way was usually clear for a talk on blister rust. After a day spent in interviewing, it seemed advisable that a large number of cultivated Ribes owned by some well known person should be first eradicated in order to gain the confidence of the smaller owners. This was accomplished by securing the cooperation of a market gardener owning some 125 bushes that were fully 900 feet from pine.

Altho at first the situation seemed to be delicate, the above facts were noted in the early stages of the work and the cooperation resulting enabled the work to progress smoothly.

G. S. Doore, Massachusetts.

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Farm forestry Committees have been organized in three counties in New Hampshire by the Farm Bureaus of the Counties. These are in Cheshire, Merrimack and Sullivan counties and Agents Baker, King and Keane have been asked to advise the committees on blister rust questions or other phases of forestry that may be closely connected with blister rust. In Sullivan county Mr. Keane was made a member of the committee.

* * * * *

WHY SHOULD I?

"I am not a pine owner! I am not interested in this question of White Pine Blister Rust! Why, this matter does not affect me in the least! Why should I vote to have my town appropriate money to protect somebody else's? I am in the fruit business and I have to spray my trees each year. The town does not aid me in this work. It looks to me like class legislation!" Such was the statement of a resident in a rural town made at a meeting at which a Blister Rust talk was part of the programme. Before the writer could make reply, one of the audience, an assessor of the town, asked for the floor and made the following reply.

"I can perhaps count the number of pine I own. Nevertheless, I am deeply concerned regarding the disposition on the part of the town with reference to this matter."

"Do you know that over 50 percent of the taxes in this town are derived from the taxation of timber? Are you also aware that nearly 90 percent of the timber is white pine. Can't you see, immediately, the important part white pine plays in our community finances? We are all aware of the results of the Blight among our chestnuts. We have no more chestnuts - they are doomed! There is no way of combatting that terrible scourge. A great amount of taxable property has, as a result of the ravages of this disease, been lost to many towns in our state. With reference to Blister Rust, the South Deerfield, Hooksett and Newbury infection areas have proven conclusively that Blister Rust can do to our pine what the blight has done to the chestnut - Wipe it out as a crop. Do you realize what that means? Just this."

"Our town cannot go out of business. It must function and to function it must have money. Money for town use must, according to law, be raised by taxation. The white pine in our town is producing nearly 50% of our annual revenue. The money that the town is now realizing from the taxation of white pine will, unless Blister Rust is controlled be taken from us. It must be raised from some other source. And where? From the remaining classes of taxable property such as you and I own. We must bear an additional burden indefinitely."

"In going into work of this kind, we must take into consideration the value of property to be protected as compared to the cost of protecting it. In this particular case it represents about 50% of the town's valuation. Available figures show that the cost of protecting the pine in Merrimack County on 149,608 acres has been only 16.2 cents per acre. Why, the total cost to the town protecting its white pine won't equal the amount it yields to us in taxes in a single year! And the cost will be spread over a period of years. The increase in the individual tax in any one year, while this work is being done, will be so slight as to be hardly noticeable! Even though it did increase it materially while the work was being carried on, wouldn't it be better business for us tax-payers to bear that increase for a short period of years than to have to shoulder the burden indefinitely, as must be the case, if we continue to sit by and do nothing toward controlling this destructive scourge!"

"With reference to your statement regarding the protection of fruit trees by the owner as against the protection of the pine by the town, I want to state that I agree with you in principle but not in its practical application. Since the subject of White Pine Blister Rust has been agitated, I have had occasion to talk with a number of pine owners in our town who had stated their belief in the seriousness of Blister Rust and their anxiety for the safety of their own pine. They have asked me what could be done about it. I know they have all they can do to find money enough to meet their current taxes. They have called this fact to my attention and are at a loss as to how the necessary work will ever be done. They know the work should be done but cannot and will not be able to afford it themselves. And there are innumerable instances in our own town just like this. What is to be done? Must they and the town lose much because of their inability to do what they know to be necessary?

"Those of us who are fortunate in owning enough fruit trees so that they have become a financial asset to us receive an annual revenue from them. The pine owner must pay taxes for many, many years before he can realize anything on his pine. The cost of protecting our fruit trees as compared to what we get out of them is small. We are in a position to do this work because of this annual cash return. The type of pine owner I spoke of is not in this same position. Continued neglect of his pine means, as we have seen, not only a loss to him but a permanent loss to the town and a continued additional burden to you and me. I don't think the case of the fruit tree and pine owner are at all parallel.

"You ask me why should I vote to have my town appropriate money to protect its white pine growth? My answer is, because it is for the town's welfare and, looking at it from a selfish standpoint, it is for your own interest and mine!

NOTE - While the value of the white pine growth in every town in Merrimack County may not be as large proportionately as that shown in the case of the town in the foregoing article and may not produce as large a share of the town's taxes, isn't it true that it does produce a fair share? Isn't it also true that its protection is as much needed in all the towns and as vital to their best interests as it is in the case of this particular town? Neither is the care of fruit trees the issue in each town. Yet the principle involved in these issues is the same.

(From The Merrimack County FARMERS' BULLETIN, Vol. IX, No. 1, January, 1924.)

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LOOK AHEAD

The recent town meetings in New England where blister rust appropriations have been considered in town affairs, have brought to light certain criticisms of the work which remind us to be on guard at all times against giving any occasion to others to find fault. One town did not appropriate because the crew members last season were charged with taking the town band instruments from their storage quarters destroying several pieces while parading the streets with them. The facts are that the crew members did not participate, but a few of them were on the side lines and viewed the performance. The selectmen in another town refused to put the blister rust article in the warrant because they contended that all state and government men are grafters and loafers. A third town did not have the article to consider because the first selectman had been aggrieved by one of the state officials and he says he will not consider it as long as that official has anything to do with the work.

These and other cases which might be cited, all point to action on the part of public officials. Some of the grievances are real, others only imaginary but the results are the same. The fault finder will always be with us but we can reduce his numbers if we strive to give him no occasion for grief, either real or fancied. Now that the eradication season is approaching, it is especially desirable to instill this thought into the minds of all crew members even before they begin work. Eradication work well done is one of our greatest assets in educational work and a well behaved crew is a big factor in securing more cooperators. These two points were illustrated at the recent town meetings. One town re-appropriated because the crew which worked there last year did excellent work and were well behaved men. An adjoining town learned of this good work and behavior of the state men and as a result, have raised sufficient money to protect its pine lands.

Let us keep on our good behavior and look ahead.

W. J. Endersbee.

STATISTICS ON THE LUMBER OUTPUT OF WHITE AND SUGAR PINE.

Second Growth Pine in New England and New York
is Worth Protecting from the Ravaging Ribes.

* * * * *

The statistics of the lumber industry in 1921 were recently published in a bulletin of the Department of Commerce. White pine ranked 5th in 1921,

forming 4.7% of the total lumber cut in the United States in 1921, the species outranking it being southern yellow pine, Douglas fir, oak, and western yellow pine. Of the 1,273,710,000 feet B. M. of white pine lumber produced by 2,282 saw mills in 1921, Minnesota led with 25.7%, followed by New Hampshire, 13.3%; Idaho, 13.1%; Maine, 11.8%; Wisconsin, 9.2%; Washington, 8.4%; Mass., 6.1%; New York, 3.5%; Michigan, 3.0%; Pennsylvania, 1.9%; Vermont, 1.1%; Conn., Georgia, Indiana, Kentucky, Maryland, Montana, New Jersey, North Carolina, Ohio, Oregon, Rhode Island, South Carolina, Tennessee, Utah, Virginia and West Virginia produced the remaining 2.8% of the total cut of white pine.

The average value for white pine lumber at the sawmill in 1921 was \$30.03 per thousand feet, B. M. The highest value was \$38.60 per M for virgin western white pine in Idaho, but the second growth white pine lumber cut in New York sold for nearly as much, the average being \$36.15 per M at the mill. Minnesota is still cutting virgin pine for which the price at the mill averaged \$26.32 per M at the saw mill. Practically the entire white pine cut in the New England states is second growth 40 to 60 years old, yet the prices per M at the mill were slightly higher than for Minnesota's product, being \$27.40 per M in Maine, \$27.36 in Massachusetts, \$27.17 in Vermont and \$26.54 in New Hampshire.

Sugar pine is not included in the white pine figures. The cut of sugar pine in 1921 was 133,566,000 feet B. M., of which 99.1% was cut in California and .9% in Oregon. The average value of sugar pine lumber at the saw mill was \$37.83 per M.

If sugar pine is included with white pine, the total will equal 5.2% of the total lumber cut of the country. Western yellow pine furnished 5.3%

of the total cut, and the oaks furnished 5.9% of the total. The big lumber species of the country are southern yellow pine, (40.6% of the total cut) and Douglas fir (17.2% of total).

S. B. Detwiler.

Fall Sowing Brings Prompt Germination of Western White Pine Seedlings.

At the Savanac Nursery, near Haugen, Mont., where a growing stock of 10,000,000 forest plants is maintained and 3,000,000 small trees are produced annually for forest planting in the national forests, the delayed germination of western white pine seeds has been until recently a serious problem. This has now been solved by fall sowing, according to W. G. Wahlenberg of the Priest River Forest Experiment Station of the Forest Service. Whereas spring-sown seeds very frequently do not germinate until the second summer (the hold-over usually amounting to 50 per cent or more of the total number that do come up and sometimes as high as 90 per cent), fall-sown seeds come up early in the following spring and by the first of summer are well established. In one instance fall-sown seeds completed germination 15 days before adjacent spring-sown plots had even started. The best time for fall sowing appears from the results obtained to be the first half of September, or the last few days of August. The solution of this serious problem of raising the western white pine in the nursery comes as the result of six years of continuous investigations.

PINE SEED EXTRACTION

On account of the growing interest in reforestation in the northeastern states, especially with white pine, the following article by Mr. Nichols on the seed extracting plant at Willsboro, N.Y. is of interest.

Editor.

The First Forest Tree Seed Extracting Plant.

The forest tree seed extracting plant at Willsboro, N.Y. is of interest as the first of the kind in the country. Mr. C. R. Pettis fostered reforestation in New York State from the start, and soon realized the need of a definite source of forest tree seeds. After some experimentation, he established in 1906 in a small building at Willsboro, N.Y. an outfit for extracting seeds from cones. Mr. E. S. Rand of Willsboro was put in charge and work began on a small scale, using cones bought from farmers in the vicinity. In 1910 the outfit was purchased by the Northeastern Seed Company of Cheshire, Connecticut, and has been operated by them ever since, under the supervision of Mr. Rand.

At the present time several thousand bushels of cones are brought each year locally in Clinton and Essex County, and from some New England states as well. Cones of white, Jack and Red Pine, white and red spruce, Hemlock, cedar and balsam are taken to the plant in the fall of the year and before the last of the following summer. These have all passed through the extracting process and are reduced to several hundred pounds of seed of various species. The cones go through a drying process in ovens where the heat is kept between 100° and 110° Fahrenheit for 24 hours and then into a tilted revolving wire cylinder which separates the seed. The seeds are passed through a small fanning mill until thoroughly cleaned, then they are bagged and stored in a cool dry place.

The cones, after extraction of seed, are usually burned, although there is some demand for them in the manufacture of artificial flowers. They would also be valued as kindling if a constant supply could be furnished.

Orders for seed, from those of a few ounces to several hundred pounds come from all over the United States.

Benjamin Nichols, Essex Co., N.Y.

FORESTER ZERBY FINDS A FINE STAND OF WHITE PINE.

District Forester Chas. E. Zerby, of Clarion, Pennsylvania, recently located a fine stand of white pine that developed in a field that grew potatoes 29 years ago. The trees stood in a woodlot in Heath township, Jefferson County, that is owned by J. M. Buzard, of Strattonville, Clarion County. A short time ago it became evident that the trees, not yet 30 years old, had reached commercial size. They were cut down, and from an acre and a half, 65,000 board feet of fine lumber were taken. Most of the logs were sawed into 2" x 4" dimension stuff, ranging in length from 10 to 14 feet. This stand grew up on fertile bottom land near the junction of two streams. All the trees developed from seeds that the wind blew on the abandoned field from nearby trees less than 30 years ago.

(From News Letter - Penn. Forestry Department)

Editor. The above yield is at the rate of 43,332 board feet per acre. Are there any stands in New England or New York which beat this at 30 years?

Pine Beetle Float Wins Prize in Parade.

A float illustrating the western pine beetle control project recently won second prize in a parade held at Klamath Falls, Oregon. The float depicted the method of controlling the pine beetle. A large infested log was placed on the truck with a stump, saw, and other felling tools. Two men rode on the float peeling off the bark from the infested log and throwing samples out to the crowd. A legend on the float stated "One pine tree in ten killed by beetles in the last 10 years, Why grow trees for beetle fodder? Beetle losses are largely preventable. Control this timber pest; it pays."

Editor: A good idea for a blister rust control float.

Extension Work in Farm Forestry

The woodlot is one of the farmer's greatest assets. It is maintained chiefly to furnish fuel, fencing, posts, lumber for construction purposes and other wood products for use on the farm. If properly cared for the woodlot will furnish a valuable crop for farm use and for market. If neglected or abused, it is bound to deteriorate. Worthless trees will often take the place of the more commercial species.

A large proportion of the 48,227 farms in Maine which comprise an area of 5,425,968 acres have a woodlot. Approximately forty-five per cent of the total farm area is devoted to the farm woodlot and an additional eighteen per cent is classified as waste land, much of which could be put to growing a valuable crop of trees. In comparing the census statistics of 1910 with those of 1920 it is undoubtedly true that the area of waste land on the farm is increasing and the forest area in farm woodlot ownership is getting smaller. In a period of ten years the annual lumber cut (M.ft.B.M.) in Maine has decreased approximately fifty percent. Along with this decrease in cutting and production of timber, the treatment which the farm woodlot has received has not been the best. In fact, this lack of attention has resulted in a deterioration of our farm woodlands, so that today the forested areas on the farm woodlands are not producing more than two-thirds as much wood as they are capable of growing.

The principles of forestry as they apply to the woodlot are easily learned and are simple in application. It does not need the introduction of radical measures which are hard to execute. The farmer already understands the methods and principles of planting, tending and harvesting of the agricultural crops and he can, with little instruction, apply these principles to the forest crop.

The Agricultural Extension Service aims to stimulate more interest in farm forestry by mapping out a program to help the farmers solve their woodland problems in a manner which will be most profitable to them, and to enlarge the wooded area by planting forest trees on all land which is not suited to growing other crops.

It is needless to speak of the interest which the woodlot owners are taking in the improvement of the woodlot. Any woodlot owner who knows the value of forest crops will gladly do all he can to protect his own timber from damage.

In the forest tree planting project which is being emphasized in several counties this year we have used the utmost care in explaining the importance of eradication of all currant and gooseberry bushes, both wild and cultivated, for a distance of at least 300 yards from white pine.

... hope that the majority of the pine owners fully realize the seriousness of this disease. Fortunately the control is practicable at a reasonable cost. With these considerations in mind we should encourage, to the fullest extent, the economic value of planting white pine on idle land which is not suitable for growing other crops and to interest as many farm woodlot owners as possible in the practice.

Other forestry projects which the Agricultural Extension Service will emphasize in 1924 is, Timber Estimating and Improved Cuttings and Thinnings.

Most woodlot owners are not familiar with the methods of estimating standing timber and are seriously handicapped by this fact in sales to timber buyers. The purpose of this project is to assist woodlot owners in determining the amount of standing timber on their woodlots as a means of enabling them to handle this part of the farm to financial advantage.

Improved cuttings and thinning demonstrations will be held in several counties the purpose of which is to increase the value of the farm woodlot by improving its condition and by insuring its continuance through the production of desirable species after cutting.

M. E. WATSON,

Extension Service, Univ. of Maine.

Success is the attainment and preservation of a practical and legitimate ideal.

Learn to like your work, and you will take the grind out of a long day. Dislike what you are doing, and you will continue to grind. Interest inspires industry, and income is regulated by results. More pay or a real promotion is the direct result of your own interest.

SUCCESS = PSYCHOLOGY + WORK

A few quotations from great men.

"You are born to victory."--Emerson.

"Form a plan, have an object; then work for it; learn all you can about it, and you will be sure to succeed." -- Waters.

"Working without a program is like sailing a ship without a compass or rudder." -- Joseph J. Lamb.

"They can because they believe they can." -- Virgil.

"The man who is perpetually hesitating which of two things he will do first; will do neither." -- William Wirt.

"The greatest thing in this world is not so much where we are, but in what direction are we going." -- Oliver W. Holmes.

"Our greatest glory is not in never falling but in rising every time we fall." -- Confucius.

"Who thinks he will fail will probably fail; who doubts himself will achieve only such results as will confirm it." -- Muriel Strode.

"Failure exists only in acknowledging it." -- Molineaux.

"Every defeat is a step toward victory." -- Jacob Riis.

"There is one way of avoiding the down-and-out club, and that is--never apply for membership. No man is down and out except the one who admits it." -- Hubbard.

"Self confidence is the iron string to which all hearts vibrate." -- Emerson.

"The world takes a man at the estimate he places upon himself." -- Hibbard.

"If you have something to say, say it often enough and folks will be bound to listen." -- A.T. Stewart.

"Victory belongs to the most persevering." -- Napoleon.

One of the best books I have ever read concerning the subject of Psychology is "Will Power and Success" by D. V. Bush. Published by D. V. Bush, 4224 Harris Ave., St. Louis, Mo. This book is listed at \$2.50. Remember, The American Forestry Association can save you ten percent.

S. D. COLLIER,

Cumberland Co., Maine.

EDITORIAL PAGE

Many favorable comments are being received on the appearance of the Blister Rust News for this year. Its appearance and make-up are better than last year, we all acknowledge. This is due primarily to the help of the field men. As one man expressed it, the News indicates a welding together of the entire blister rust organization. Such good numbers are only possible because of the close cooperation of all of you.

Let us have for the May issue, which will be the Vermont Number, short pithy statements of blister rust activities during Forest Protection Week. S. V. Holden has a good write-up on this subject in the Brattleboro Daily Reformer of April 15 tying in our disease control work with forest protection.

Did you get "Helpful Hints in Newswriting", published by Webb Publishing Company of St. Paul, Minn. These were distributed from the Washington Office about the first of April, and should be of real value to you in connection with using your News Nose.

THE IMPORTANCE OF SCHEDULE

"Imagine the waste of time, energy and materials and equipment, to say nothing of the danger, in trying to run all the passenger and freight trains of a railroad like the New York Central, between New York and Albany, without a schedule," says Dr. K. M. H. Blackford, in a recent book called, "The Right Job."

And the doctor points out that it is equally as wasteful and foolish to attempt to make a success of your life, of your business or even the experience of one day, without some sort of a time-table.

Efficient people are the budget people.

The housewife who exclaims, at the end of every month, "I cannot imagine where all the money goes to. I am sure I have spent very little. I have not been at all extravagant," and yet finds that she has heavily overdrawn her allowance,

is a type of all the school boys, clerks and business men, farmers, mechanics and others who never achieve the satisfaction of getting ahead simply because they never take the pains to arrange a schedule or a budget.

From: The Washington Times, April.28, 1924.

CONTEST ANNOUNCEMENT

A bulletin entitled "White Pine Blister Rust in Western Europe" by W. Stuart Moir, has recently been issued by the Department of Agriculture. Copies have been sent to all the men on the work.

We know but little as yet from observation, about what blister rust will do in this country if control measures are not applied. The control of blister rust by the large scale eradication of Ribes is not attempted in Europe, and consequently, the effect of the disease there is startling. White pine is no longer recommended for extensive planting there although very well adapted to all other conditions of site, and at one time so popular that medals were offered for its planting in England.

Mr. Moir made numerous observations on damage in several countries of Western Europe. His bulletin contains many figures supported by photographs, that are striking. He also gives the opinion of European Foresters concerning the disease.

All this material is good "dope" for us to use in the United States. Where can we use it to the best advantage, and in what ways can it be used?

Some of the fellows on the work have offered a prize to the Agent who sends in by June 1st., the best article on methods, place, and reasons for using this data.

The article will be judged by an impartial committee to be announced later.

The basis for the decision will be:-

1. The number of practical suggestions given for making use of the information and photos in this bulletin to aid in our work.
2. The estimated value of these suggestions for increasing the public appreciation of and cooperation in blister rust control work.
3. The care given to details such as ways of preparing this material, aim in using it, and expected effect.

The prize offered is a year's subscription to the magazine of the American Forestry Association or the equivalent in books on forestry subjects.

P E R S O N N E L

Minnesota

Mr. Torfine L. Aamodt has received a temporary appointment as field assistant to take effect April 15. He will be engaged in quarantine inspection work in St. Paul and Minnesota.

A. J. Lambert, one of Maine's temporary agents was sojourning at Miami last winter. Shortly after his arrival he wrote State Leader Frost he liked it so well that he intended to stay three years. Two or three weeks later he writes, "what is the earliest date you can use me this spring"? Evidently Lambert prefers Maine swamp water and mosquitoes to Florida sunshine and waving palms. There's no place like home. Lambert's appointment was made effective April 15.

General

Mr. and Mrs. Jacob Arnold, who are now living in Pittsburg, are the proud parents of an infant son. Mr. Arnold was employed in the Boston Office from 1919 to 1922, when he resigned to enter the Treasury Department in the Bureau of Internal Revenue. Mrs. Arnold, better known perhaps as Miss Mary Brennen, was connected with blister rust work from July 30, 1917 to October, 1921, both in the Washington and Boston offices. Congratulations are in order.

Mr. S. N Wyckoff, in charge of the western work of Blister Rust Control, with headquarters at 624 Realty Building, Spokane, Washington, was recently in Washington, D. C. for a short assignment.

George F. Richardson, of Southern Grafton County, is to be married on April 19. Congratulations Rich.

P E R S O N N E L

Dr. J. F. Martin gave a talk on April 15 before the Extension Conference of the Department of Agriculture on White Pine Blister Rust Control in the northeastern states in cooperation with the State Extension forces. This talk was well illustrated with paintings, charts and maps.

Miss Vivian Pinkard, of the Washington Office, has recently (April 26) changed her name to Mrs. Chas. L. Madden.

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Mr. C. E. Randall, formerly in Blister Rust Control work in the West, and later in the Washington Office, is now Managing Editor of the Alexandria (Va.) Gazette. The Alexandria Gazette recently published the following editorial:

Saving the Pines.

"The white pines of Europe are almost extinct, and the white pines of America are doomed to follow them if care is not taken.

"It is unnecessary to say what a calamity this would be, from the standpoint of either utility or beauty. Every American who ever uses the wonderfully adaptable wood of the white pine, in any of its thousand forms, every person who owns a white pine grove in the country, every city householder who has a specimen or two of this noble tree in the yard, every person who ever rests his tired eyes by glancing from hot pavement to green boughs and inhales fragrance reminiscent of far woods must want the pines saved.

"Yet year after year, the white pine blister spreads and enlarges its devastation. And most people let it keep right on spreading, in spite of the fact that the pest is easily checked.

"All that is necessary is to eliminate currant and gooseberry bushes, tame or wild, in the vicinity of the pine trees. The deadly blister rust does not travel directly from tree to tree, but jumps from a tree to a currant or gooseberry bush, and then, the next year, back to a pine tree, and so on in regular alternation. Break the chain, and the wind-blown spores sink harmlessly and the disease dies out."

P U B L I C A T I O N S

Blister Rust

Wallace, Henry C. White Pine Blister Rust. In Report of Secretary of Agriculture, Nov. 15, 1923.

Detwiler, S. B. Saving the White Pines. How Science Overcomes the Blister Rust. The American Review of Reviews. 49:4, pp. 411-414, April, 1924.

(Includes 6 illustrations and a map showing the distribution of the blister rust).

White Pines

Cline, A. C. The Group Selection Method with White Pine. Journal of Forestry, 22:2, p. 123-134.

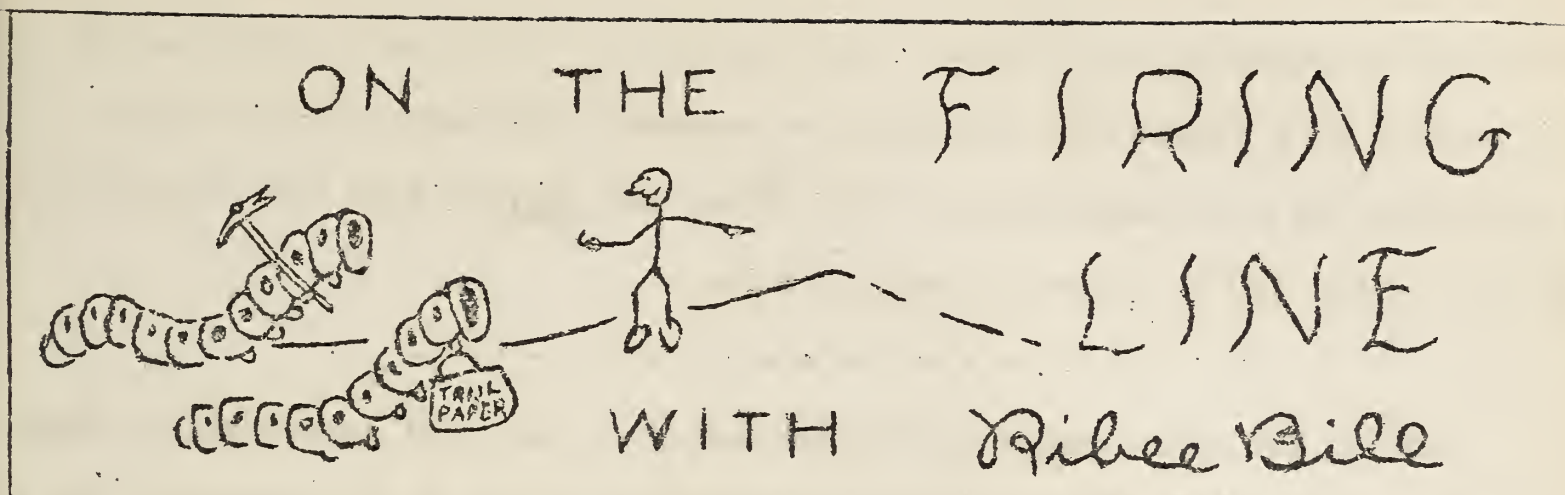
Summary:

White pine in the unevenaged form is found growing as a relatively permanent type on light, sand and gravel soils of north central Massachusetts and southern New Hampshire. The permanent character of this type is due to the impossibility of hardwoods of vigorous growth coming in in sufficient numbers to crowd out the pine. On the better grade of light soils where the rate of growth of white pine is sufficient to justify its continuance for successive crops, the selection method, or one of its modifications, appears to offer the best adjustment of financial and silvicultural needs.

On the most sterile of the light soils the rate of growth of white pine is oftentimes so slow that it is probably advisable to recommend its replacement with either red or Scotch pine. Plantations of red and Scotch pine on sand plains in this vicinity exhibit a much better rate of growth than that of white pine on the same soil.

On the heavy upland soils white pine is commonly found in the evenaged form growing on abandoned farms. While no system of reproducing the "old-field" type has yet been devised which will effectually check the determined ingress of hardwoods both before and during the reproduction period, the clear cutting and shelterwood methods, followed by weedings, have given the best results.

- - - - -



Corking! Great stuff! This Maine number caps the climax of three good issues of the state series of the News. What's that? - - Vermont, New Hampshire, Connecticut and Rhode Island seem to disagree? - - "Go on, Ribee, this is only an anti-climax for the whole series, wait 'till we get our turn!" - - All right, that's the spirit! Golly, you fellows have out-run me already, and I expected to set the pace with an article each month. Fact is, last month I got stuck in the mud ruts like a lot of the fellows do at times. Was on a town thru the district and did not get down to the sending station in time.

That New Hampshire bunch is feeling pretty good over the success of town appropriations for control work, and there are rumors of some big surprises when their turn with the News comes around. I got an earfull of good news there, I thought, but no more had I stepped into the state of Maine than the Agents there had me swamped again. They were bubbling over - some steam in that Pine Tree State kettle - and this issue shows it. Best part of it is they are not exhibiting the color of the broth - instead they show us how the kettle is being fired. No secret or patent on their methods.

Do you read "Better Crops", the little magazine that is received each month in County Agent Offices? I find a lot of good articles and ideas in every number. For instance, in the March issue, the Editor, Jeff McDermid,

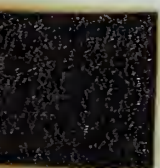
writes on Cooperation - and believe me, that is an article worth reading. We are engaged in a cooperative campaign, we cooperate with many persons and organizations, we hear Cooperation on all sides, but what is this here Cooperation? You will enjoy Jeff's answer as much as I did.

And in the April number of "Better Crops" be sure and read "Selling Ideas to the Farmer" by Lawrence W. Taylor, it applies directly to our project. You can also get some good dope on what to read from "Books That Have Helped Me", by F. C. Smith, in the same issue. Mr. Smith, by the way, is the Agricultural Agent in Essex County, New York, and is a strong worker for Blister Rust Control.

The Agents "down" in Maine are scratching their heads to find a way to employ ten men with money available for only one. Somebody please solve that problem for the next issue. While Tom King, over in the Granite State, has so much money he is puzzled how to get men and organize the work most efficiently in a single season. Are you afflicted that way? These chaps would like to get some information on how these things have been done before. Come on, fellows, dig out your "Helpful Hints in Newsriting" and tell us the what, why and how of some of YOUR work. In the meantime, we are slating an article from Jack Frost for the November issue on "Successful Methods of Stretching Dollar Bills", and Tom King for one entitled "A Large and Efficient District Organization."

The other day, a copy of the "System" magazine helped me to increase the profit of time spent on a long train ride, because it was full of ideas. Not wild ones, but practical ideas, used successfully by big business men in selling, office routine, organization, and the like. Fifteen of these ideas, by actual count, applied to our problems - and some of those are working for me now. When you fellows run into some good book, magazine, or article, send the tip to the News.





BLISTER RUST NEWS



JUN 15 1924

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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry
Washington, D. C.

T H E B L I S T E R R U S T N E W S

Issued by the Office of Blister Rust Control,
and Cooperating States.
Vol. 8, No. 4.

VERMONT NUMBER

June 15, 1924.

THE PROBLEM OF SECURING COOPERATION OF LAND OWNERS IN VERMONT

The cooperation of land owners has been secured primarily through personal interviews, although newspaper articles, letters to pine owners, window displays, and other forms of publicity, have played an important part in paving the way for the personal contact that seems necessary to actually get the owner to eradicate Ribes on his property.

In analysing the causes contributing toward whatever success we have had in securing cooperation, it becomes apparent that the most important factor is the personal contact and this contact has been the foundation upon which our efforts have been based. In only a comparatively few instances has cooperation been secured solely through general publicity or even by a direct written appeal.

Since the personal contact is so essential in our system of work, a brief statement of the method of approach is appropriate. Of course we do not repeatedly follow any hard and fast procedure, but aim to adapt our method to the need of the particular case. We find a big advantage in knowing as much as possible about the owner's pine lot before making the interview, and to gain this information a preliminary inspection is made by the agent to roughly determine conditions, such as age and growing condition of the pine, amount of infection, number and kind of Ribes present and an approximation of the cost of control. Whenever practicable to secure, a lump sum estimate has proven more acceptable to the owner than a per acre cost besides avoiding a comeback after the work is done due to misunderstandings as to necessary acreage covered. This statement is made as a result of considerable experience with pine owners who did not grasp the necessity for such large protective strips on small areas. A preliminary survey also allows the agent to talk concretely and authoritatively on the particular proposition and impress the cooperator much more favorably than does an intelligent guess based upon average conditions. Another advantage of a preliminary inspection we have found to lie in the ability of the agent to take those pine owners who want to see conditions, directly to points of interest without wasting the time of the agent or the owner. From a purely psychological standpoint this is important.

While the personal interview has proven to be almost essential in most cases, it is by no means the whole story. Various forms of general or preliminary information are effective in preparing the mind of the pine owner for the personal interview. Most of the pine in Vermont is in small lots owned by the farmer. The farmer as a rule, in contrast to the business man,

does not react quickly to new ideas and for this reason he must be previously prepared with the facts and must have had time to think them over at his leisure, adapting them to his own case in terms of dollars and cents before he will commit himself to any line of action. The facts are brought to his attention through two channels; either by a direct statement in writing through a personal communication or a form letter, or else through the more indirect route of general publicity. By the general publicity route we find that the owner often absorbs only a little at a time but by constant repetition or by a continuous elaboration the whole idea is put across. This class of publicity reaches the general public. As a result, when the whole community is talking about blister rust and accepts our statements as facts, the agent's task of getting action by the pine owner is greatly simplified.

The direct method of preparing an owner for the agent's interview or even to get immediate action by a personal letter has proven very effective. The personal letter was used last year to acquaint resident owners with the blister rust and to ask for appointments.

In the White River Junction district 25 letters were sent out. Answers were received from 22 and everyone of these who had pine to protect made appointments and subsequently cooperated in the control work. Only three letters were unanswered.

Mr. Holden used the personal letter to secure the cooperation of non-resident owners. He explained rather fully the blister rust situation, enclosed a contract and asked them to sign. Letters were sent to 20 people resulting in 18 contracts for work and 2 appointments for interviews. This method has been employed by other agents in Vermont with very gratifying results, although not as successfully as in the above instance.

Mr. Stevens sent out about 150 personal letters to land owners who were supposed to own white pine. About 100 of these letters were answered. Nearly all proved to be pine owners and approximately 75 subsequently cooperated, either doing the eradication work themselves or allowing the state to put in a foreman or crew. These results not only show what can be done in Vermont by this means but have opened up for us possibilities for the future that may greatly simplify our problem of reaching the numerous pine owners scattered throughout the state outside of the regular districts.

Our agents have come to recognize three distinct types of cooperators, the farmer, the business man and the summer resident. The farmer in Vermont is the most important and has proven the most difficult to secure because of his natural conservatism and often because he is not able to easily finance a Ribes eradication job. The business man class, which includes lumber companies, because of their business training are apt to readily appreciate the necessity of protection, while the summer residents being interested principally in the ornamental or esthetic value of the pine and being usually well fixed financially are anxious to cooperate. Each type (as does the individual within the type) requires a different approach, and consequently the problem of securing their cooperation has called for the application of all the ingenuity and intelligence that the agent can put into the subject, and by its very complexities and

diversity has become a fascinating study as well as a matter of daily routine.

F. H. ROSE AND J. E. RILEY

COOPERATIVE WORK WITH THE WHITE MOUNTAIN NATIONAL FOREST.

The Forest Service with assistance from the Bureau of Plant Industry and the New Hampshire Forestry Department is undertaking the Control of Blister Rust on the White Mountain National Forest. Mr. W. D. Black, formerly a Blister Rust Control Agent in Massachusetts, is now with the Forest Service and is in immediate charge of the work. Mr. L. W. Hodgkins is temporarily assisting Mr. Black. Mr. Filler, who has just returned from a weeks field trip in New Hampshire, states that in spite of adverse weather conditions the control work on the National Forest is progressing satisfactorily.

CAPITALIZING THE INTEREST OF THE PINE OWNER

Ingenuity is a valuable asset to Agent Bradder, of St. Johnsbury, Vermont. The town of Barnet has many Silas Hardnuts and few cooperators. One of the latter, who would be an unusual character anywhere else but in unusual Vermont, is a pastor of a good-sized congregation, farmer, horticulturist, and pine owner. Three years ago he decided that the Ribes should be removed from his pine areas and that he could do it alone, without trained assistance. Last fall, in company with Mr. Bradder, he found that Ribes were still numerous on his property. He decided that systematic crew work was the only way to get them out, and agreed to cooperate this spring. But Bradder did not let the matter rest there, he secured the pastor's promise to act as foreman on other Ribes eradication jobs in the town, principally for moral effect. More cooperators and fewer "Hardnuts" in the vicinity of Barnet are changes that can be expected in the near future.

VERMONT TOWN APPROPRIATIONS

Until recently no Vermont towns have appropriated funds for Blister Rust work, because there are few towns where pine is abundant enough to apparently warrant an expenditure on a town basis. In previous years the state helped the pine owner out to the extent of paying excess labor costs amounting to the difference between a day labor wage and the higher wage paid the foreman. Due to a change in state policy the payment of excess labor was discontinued, leaving the entire burden of labor cost upon the pine owner. Only two towns considered appropriating blister rust funds this year and they contain enough pine to justify the expenditure of public money for this purpose. These towns were Thetford and Norwich.

Norwich voted not to appropriate while Thetford voted an appropriation of \$100.00 for blister rust control work.

At the Thetford town meeting a forestry committee was appointed to see whether the town would start a town forest. The committee is heartily in favor

of the project but for the present will content themselves with establishing demonstration areas in different parts of the town upon which will be planted various species of trees adapted to the particular locality, the money for such work being raised by popular subscription. The matter has been taken up with the State Forest Service who will cooperate with the town committee in all ways possible.

F. H. Rose,

White River Junction, Vt.

A printed pocket leaflet has been issued by the Conservation Commission setting forth the Rules and regulations governing white pine blister rust control work in New York State. It was prepared by Dr. York, who has probably sent a copy to the various state leaders for their information. It is neatly gotten up in practical form and should be very helpful.

MASSACHUSETTS NOTES ON

THE REMOVAL OF CULTIVATED RIBES

Reference has been made from time to time to the fact that the Massachusetts policy with regard to the removal of cultivated Ribes is to go the limit in the exercise of persuasion rather than compulsion. The success of this policy is illustrated by the record from Mr. Brockway in Plymouth-Norfolk District.

During the latter part of April, the territory worked last fall was checked up for cultivated Ribes and it was found that since the close of the active Ribes eradication season last year, 158 property owners had removed 3779 bushes of their own accord. The number owned varied from the proverbial 1 to a maximum of 913. Mr. Brockway writes in as follows, in reporting the removal of the patch of 913:

"In checking over this area we found that the owner had removed 825 bushes last fall but had overlooked 88 which we removed at his request. This is good-bye to a one-time patch of 17,000 bushes. These were in the midst of one of the worst infection areas in the town of East Bridgewater."

From the above, it would appear that the blister rust publicity Mr. Brockway is endeavoring to put across in his section is having its desired effect. Keep up the good work "Brock"!

Another instance of the working out of this policy is evidenced by the following correspondence with a Justice of the Massachusetts Superior Court concerning the removal of a patch of cultivated Ribes:

Letterhead

September 24, 1923.

C. C. Perry, Agent,
Mass, Dept. of Agriculture,
135 State House, Boston, Mass.

Dear Sir:

Your favor of September 19th was received and contents noted. I dislike very much to take up the currant bushes on my place in West Boylston, but if it is necessary to do so to preserve the white pine I will do it. I do not feel, however, that I ought to be asked to do it without some compensation. I note in Nursery Company's catalogue that the price of currant bushes is forty (40) cents each. It seems to me that the price paid by the Commonwealth is exceedingly small, however, if the Commonwealth will pay fifty (50) cents per bush for my bushes, I will see that they are taken up. The day I receive a notification from you that compensation will be allowed at that rate, or \$51.00 for my bushes, I will have the bushes pulled up. This will save your department the bother and trouble of doing the work in strict accordance with law. If this offer is not satisfactory to you, I shall expect that nothing will be done except in accordance with the law.

I have on my place, the following bushes: 10 white currants, 15 black currants, 52 red currants, 13 white gooseberries, 12 red gooseberries; making a total of 102 bushes, or at 50¢ each, \$51.00.

I shall be away holding the Superior Court after this week so I would like to know what is to be done about this before I leave.

Very truly yours,

.....

The following is the "notification" he received.

Cooperative Letterhead

September 25, 1923.

.....
.....
.....

Dear Sir:

I have your letter of September 24 and I am sorry to note that you are unwilling to dispose of your currant and gooseberry bushes without compensation as provided by law. I feel that it would be very unwise for the State to pay compensation to one in your position in the community when so many others are willing to make the sacrifice without reimbursement for their loss.

I would simply like to repeat my recommendations that your bushes be disposed of for the protection of the pines in your locality.

Respectfully yours,
Massachusetts Department of Agriculture
By:
(Signed) C. C. Perry

Aecia were found on some of the Judge's pet pines, on April 30 with the following result:

Letterhead

Mr. C. C. Perry, Agent,
136 State House,
Boston, Mass.

Dear Sir:

Your favor of May 1st relative to the white pine blister rust on my trees in was duly received.

In reply I will state that I have this day pulled up all the cultivated currant and gooseberry bushes on my property. They will be burned on the first suitable day.

It is my impression that there are some wild currants bushes on my property.

Very truly yours,

.....

It was not the saving of the \$51.00 that we were concerned with but the principle involved!

Mr. Roop reports similar results from his district and at the agents conference reported that as a result of the general publicity work of the past two years, the opposition to our work is fast disappearing.
SPEED THE DAY !

THE SMALL JOE PROBLEM

Small Ribes eradication jobs and many cooperators means a big job for the agent. He may be able to use three or four crews, keep them working and not spend all his time supervising and checking, provided the work is well planned and some time is spent with the foremen before the eradication season opens to acquaint them with the different areas on which they are to work.

I keep each crew in a certain section of the District and use my spare time arranging for cooperative Ribes eradication ahead of that crew which has the smallest amount of work in sight.

A map of each area is a great help, both to the Agent and to the foreman. Ribes eradication under such conditions means long hours for the Agent, and I find it necessary to interview landowners in the evenings and on rainy days. Rainy weather is an especially good time to see the farmer.

S. V. Holden, Brattleboro, Vt.

INFORMATION WANTED

In scouting for Pine infection a certain woman's property, we found a number of trees infected with the rust.

The woman had a bad case of hives, and inquired if one could get the hives from the infection on the pines.

Has any one any data on this?

BLISTER RUST AS A DOLLARS AND CENTS PROPOSITION.

The spending of dollars and cents in blister rust control: The saving of dollars and cents by blister rust control. The spending of money or labor in the eradication of currants and gooseberries: The saving of commercial and esthetic value of white pine by this method of controlling the blister rust. Spending money to save money, or value.

Blister rust control is not insurance. No company would, nor could profitably, insure a mixed stand of young pine and Ribes against damage from blister rust. Insurance is financial protection against something that might happen; blister rust control is absolute protection against something that will happen otherwise. A house without insurance is a common gamble, a young pine lot without blister rust control is a 1 to 1000 shot, with all bets off in Warren and Essex Counties. Eradication of Ribes is therefore more than pine insurance, it is actual protection rather than potential protection.

The spending of dollars and cents in blister rust control: the saving of dollars and cents by blister rust control.

What is the ratio between the two groups?

How can this ratio be bettered?

How can the prospective cooperator best be convinced of this ratio which proves the financial wisdom of eradication?

The ratio between dollars spent and dollars saved is vague in our minds. We know that enough is saved by control work to make such work financially sound. Just how much, we do not know. We ought to know that for every white pine type in the state. It will vary not only with the stocking on the stand, but also with the cost of eradication, the length of time before re-eradication will have to be done, the age and growth of the pine, its accessibility, its value at maturity in that locality, its influence on the employment and wealth of the community, on the proportion of trees already fatally infected, and the chances of the rest escaping the disease. The figures necessary for arriving at this ratio can be determined in a general way, and the finding of the ratio from these figures is simple arithmetic, but this has not been done.

We might try an example, eliminating some of the factors more difficult to determine. Take for instance the Kelm Mountain area of approximately three acres of natural pine growth from 10 to 14 years of age. It has on the average about 500 trees to the acre, practically equivalent to a plantation say 12 years of age. Suppose that Blister Rust was not there now, but would eventually wipe out every tree on the area. The value of the stand at present per acre, discounted back from a maturity value of \$500. per acre at 4% compounded annually, from 50 years of age, is \$110.51. Neglecting the protective strip necessary in this particular instance, it is safe to estimate that \$2.00 per acre will eradicate Ribes on this area and that re-eradication will not be necessary as the bushes are all large. \$2.00 compounded at 4% for the remaining 38 years till maturity, is a little under \$16. Therefore, without considering the loss of taxes if the area was not protected, nor the benefit derived by the community from the area, the ratio would be around 1 to 7.

Such a ratio can and should be determined for several definite types and conditions, and should govern at least the type on which the control should concentrate.

We can better the ratio at both ends. Our object is the second part of it. Sometimes we think too late about the first part, the spending of the money. It is a human tendency to spend other peoples' money more freely and less efficiently than our own. We must endeavor to spend every dollar of federal, state, and private funds as carefully and as efficiently as we would our own. We must work to reduce costs, study and experiment to find more efficient crew methods. As Agents watching, supervising, and directing eradication work, we are in the best position to discover and work out improvements. It is a case of keeping our eyes open and our minds at work.

At the other end of the ratio we can also better it. The value of white pine stands can be materially increased by proper management, by

eradication ahead of the disease, and by more efficient marketing and closer utilization. We may be able to help in the latter fields, by advising the owner of the proper source from which to get the information he needs. It is our job to do so.

Selling Blister Rust Control consists largely of putting the protection ratio across to the owner in simple form. With many owners the dollars and cents argument will be the important one. The average owner sees the first part, the spending of money, ahead of the second part, it is immediate, the other is ultimate. Our work is to convince him of the second part, the saving of money by control work. This requires salesmanship.

We must first establish in his mind values. Not present lumber value of his immature pine, but its value at maturity, or its present value figured back from its value at maturity. Compare with the cost of plantations which are paying investments. Paint word pictures of pine land values, monetary, esthetic, and patriotic--do not try this blindly, avoid striking discordant notes, but paint word pictures nevertheless. Get the owners' mind off the present dollar. Use printed facts, letters, bulletins, and evidence in black and white is valuable in strengthening your word pictures in his mind. Avoid complicated figures. The ordinary farmer is not interested in compound interest computations. He has the land; much of it is unproductive, except in pine. Simple interest on what the owner loses by carrying idle land will more than offset the compound interest on the cost of producing a pine crop. The best way to cover this point is to get outstanding local examples of the value of pine as a crop, study these thoroughly and use them by taking land owners there to be convinced for themselves.

After establishing value, if the owner was not already convinced of of this point, the next step is to give him confidence in the success of control work. Cite instances of successful work, describe inoculation experiment with various kinds of spores, capitalize experiences of neighbors. Radiate enthusiasm, inspire confidence in yourself and in the work. Show damage study figures in black and white; always go very slowly in explaining figures, they are not often clear at a glance. Never reiterate a point in an argumentative way, once it has been granted you, always keep your "score" in mind.

With the value of pine established and the confidence in control work inspired, you have aroused the desire that must be led to action.

A. E. Fivaz,
Agent.

FAMILY COOPERATION IN VERMONT.

It has been my experience that one of the principal essentials in lining up cooperation is to place oneself as much as possible in the pine owner's position, and to make Blister Rust Control seem more like ordinary procedure rather than just another new-fangled notion. To this end, I have found my wife a valuable assistant while interviewing prospective cooperators,

who are farmers for the most part. She is often with me on interviewing and inspection trips staying at the farmhouses and acquainting the women folks with the Blister Rust situation while I am doing the same with the pine owner in the field. In several instances this has been the means of obtaining cooperation when the pine owner was not in favor of protecting his pine. And if he is convinced in the field, his decision is strengthened on his return to the house by finding the women folks already sold to the idea.

On one occasion while making an interview, I discovered to my dismay that the person to whom I was endeavoring to explain the disease was French and could not talk or understand English. The Mrs., who talks French fluently, came to my rescue, acted as interpreter, and the pine owner agreed to cooperate.

These and similar experiences have proved to me that both members of the family can be Blister Rust Agents.

F. H. Rose, White River Jct., Vt.

OPPORTUNITIES FOR BRIGHT YOUNG LADIES
IN BLISTER RUST CONTROL WORK

84 percent of the Blister Rust Control Agents are unmarried, and this is Leap Year. We need all the help we can get.

S. B. D.

Agent McNerney of Massachusetts reports that he has found the first real progressive dirt farmer in Massachusetts, as he puts it, - in the person of Mr. James Wood of Warren, Mass. Mr. Wood has his own nursery where he is raising young pines which he sets out on the side hills of his farm. He owns 240 acres and is doing a fine job of planting them. He is going over his land this spring in search of Ribes.

THE MOTION PICTURE AS A PROGRAM FILLER.

I had felt the need of something to fill up my program for the winter months and, as during the past Ribes eradication season I had observed good results from the blister rust motion pictures shown in the villages the previous winter, I started (with this lead) an educational campaign early in the past winter which brought, what seemed to me, surprising results. I began with weekly talks and blister rust films at the Fairbank's Museum of Natural History as a part of their regular botany course, but soon realized that I would need variety if I expected continual good attendance. I appealed to the Office of Motion Pictures and believe me that Office sure can give service. They sent me two new films each week for two months on every phase of forestry and farming and at each showing I included a blister rust film, and it worked fine. I soon had all the appointments I could handle at lodges, clubs, schools and churches.

On one occasion the pastor took "Be as the Pine" for his text and likened blister rust to pine, as vices to humans, advertising the sermon in the paper the day previous. He told of the Ribes eradication work here at St. Johnsbury that ^{was} planned for the future. Blister rust films were shown after the sermon and the congregation had many questions to ask; they said they liked the novelty of the thing.

The demand for the pictures increased until I reached the limit in four showings to academy classes during one day and a forestry club and a troop of Boy Scouts the same evening. After that I felt that the district had reached the saturation point with the filmed story of the blister rust.

Moving picture talks are a double-barrelled means of publicity, as in addition to those attending, many persons are reached by the announcements and writeups in the papers. All this publicity being of an established form and appearing with the assistance and backing of the Fairbanks Museum and the State and Federal Governments, serve to correct the impression that the danger from and control of blister rust is just the Agent's dream, or that it is the new fangled idea of a few, based on hasty conclusions.

I have experienced pleasant reactions from this work so far this spring in interviewing pine owners, and I have every reason to believe that it is going to help me materially during the season.

W. E. Bradder,
(Agent)

INDIVIDUAL VERSUS FORM LETTERS

When asked for a copy of the letters he sent to pine owners with such success, Agent Holden, of Brattleboro, Vermont, stated that he had no set form, but believed in writing individually distinct letters applying directly to each case and giving definite facts for each area. "One of the best arguments to secure the cooperation of a non-resident owner, I find," says Mr. Holden, "is to state that most of the surrounding owners have eradicated or have signed up to do so, giving their names. For this reason, the non-resident owners are usually the last ones I try to reach in any community."

The firm of Rust & Blister, 624 Realty Bldg., Spokane, Washington, has recently made its appearance, according to an envelope sent in recently by friend Wyckoff.

Who would recognize our Western Blister Rust Office under this cognomen?

BLISTER RUST IN HIGH SCHOOLS

My blister rust educational work in High Schools started in 1922. A High school boy worked in one of my eradication crews, and helped make arrangements for a permanent exhibit at the high school building. I had a blister rust talk before the school when the exhibit was placed and blister rust movies were shown at the school later. Several field meetings were held the following spring, damage and disease and control methods were demonstrated and many Ribes and diseased pines were pointed out.

The best meeting was held where the pine was about 25 years old, many stem cankers were fruiting, and three kinds of Ribes were found on the area. This seemed to convince the biology teacher as well as the students. Blister Rust bulletins were given out and later the teacher gave her class an examination on blister rust.

Several field demonstrations were held during the "fruiting" season this spring and arrangements made to place exhibits in six high schools and several rural schools. These exhibits will consist principally of local "fruiting" pine and local Ribes planted in boxes. Short talks will be given where the exhibits are placed and free bulletins will be distributed.

Undoubtedly such informed teachers and students will render valuable service to the work and the agent. The true worth of this kind of blister rust education has come home to me many times the past year. I have found that the children by taking home to their folks the blister rust story and literature cause their parents to be in a receptive mood for the agent's personal interview, and decrease the amount of work necessary to secure their cooperation. The assistance of the school children prepares the ground for the initial interview, besides giving additional weight to the Agent's follow up work.

S. V. Holden, Brattleboro, Vt.

INTERESTING THE PUBLIC IN RIBES ERADICATION

When Ribes eradication work is being done in your town, why don't you plan on getting out with the crew some day, if only for an hour, to find out how the work is done. A general invitation is issued, not only to farm Bureau members and pine owners but to the public at large. They ought to become better acquainted with the nature of the work and the manner in which it is done. The only way to do that is to get behind the crew and watch it work. Mention will be made each month as to the towns in which work is being conducted and you can plan accordingly. Those interested in getting out in the field should acquaint the foreman in charge in their town, with their desire and he will inform them just where the work is being done. It is hoped that it will be possible to hold a blister rust meeting in many of the towns in which control work will be done this year. Notification of these meetings will be given in the same manner as Farm Bureau meetings.

Thos. J. King,
Merrimack Co., N. H.

Extract from an article in The Merrimack County (N.H.) Farmer's Bulletin for May, 1921, entitled "To Start White Pine Blister Rust Control Measures This Month."

Edit. This looks like a bang-up idea. Isn't it possible to duplicate this in your District?

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PAGE - A STATE LEADER.

Letter dated May 24, 1924, from hopeful applicant. Qualifications: "Can swim, paddle a canoe and have a knowledge of first aid to the injured."

Note: - If the rainy weather continues much longer, here may be a solution to our difficulties.

E. C. F.

BIRD CLUB BOYS IN MAINE FIGHT WHITE PINE BLISTER RUST.

Is there a doubting Thomas or Thomasina who says that nature study in the schools or with the Stanton Bird Club is not really amounting to anything lasting for the children? Well then:

Richard Simmons, one of the boys who took part in the fine little program with which Miss Jordan's pupils installed the Bird Club tree on Arbor Day, was out with the bevy of breakfast-walk juniors Saturday morning. Over on Russell street they were pursuing in comparative quiet and considerable eagerness an elusive white-throat sparrow. Suddenly Richard gave a loud boy-sized yell.

"Gooseberry! Gooseberry!" he shouted. Kill him! Kill him!

And he hurled himself on some wild gooseberry bushes several feet away from the road, which none of the seniors had noticed. But Richard saw them and knew them at once as the carrier of the White Pine Rust and a menace to the pines of the Sisters' woods near by. It was no easy stunt to get those rankly growing bushes out from the tough-rooted grasses, but Richard persevered in his self-appointed task and presently three big bushes more than half as high as himself were hauled out and carefully laid across the road where the sun and passing traffic would accomplish their destruction. Thrown down on that damp rich soil of the road side they would soon take up living again, for the gooseberry has a root for every joint, if necessary.

A few days later another one of Miss Jordan's boys was in a local garden where a large bush that annually decked itself out in spicy fragrant yellow flowers was beginning to blossom. He asked its name. "Spice currant" said the owner of the bush giving her grandmother's name for the good old-fashioned "front door favorite."

"Will it cause white pine blister rust?" said the boy.

"Why, I don't know. I never thought of that as long as I've had it," said the gardener. And she never had. But the youngsters remembered. How many of the seniors who heard Professor Sawyer's call to arms against the White Pine Blister Rust have practiced what he preached as faithfully as these juniors?"

(From the Lewiston, Me. Journal of May 22, 1924.)

The Massachusetts Blister Rust Agents met in conference with State Leader Perry at the State House, Boston on April 5. Each Agent gave a brief summary of his work of the winter months and the prospects for Ribes eradication. From all appearances the season of 1924 is to be a most busy one with more cooperators than ever before taking an active part in the protection of their pines from blister rust.

The Ribes eradication season of 1924 was started on April 16 in Massachusetts in District III Plymouth-Norfolk, and in District VI Worcester (South).

The first report of open aecia in Mass. this year came from Mr. Brockway reporting from the infections on the Ames Estate at North Easton on April 17.

A PINE TREE TROOP OF BOY SCOUTS.

In thinking upon a way to most satisfactorily reach the younger generation with a knowledge of Blister Rust I decided that a troop of Boy Scouts thoroughly schooled in Ribes eradication methods would function well as a source of information for the future pine owners of this district.

During the past winter, I secured a troop charter and organized twelve intelligent and interested boys into the "Pine Tree Troop". We followed the Scout program of activities at our evening meetings but on our Saturday hikes we concentrated on Blister Rust. As conservation is a distinct part of the Boy Scout scheme we are using Blister Rust control as a means of putting it into actual practice.

The troop has now been organized for five months and the boys have progressed from tenderfoot to second and first class scouts, while uppermost in their training has always been the means of the control of the blister rust. Several pine plantation owners have agreed to have the older members of the troop act as crew men under a state foreman in the eradication work on their property.

Twice during the winter we arranged a rally of all the troops in the district to see motion picture films on blister rust and hear readings on the history of the disease, written by the scouts.

This work with the boys has opened for me a means of becoming more rapidly acquainted throughout the district and has also strengthened my standing here. After tackling some cantankerous pine owners I find new energy in the loyalty of these boys to the cause of Blister Rust and I believe that they will prove a mine of information in coming years to the pine owners, even after the Blister Rust Control campaign is over.

W. E. Bradder, Agent.
St. Johnsbury, Vt.

COMMENT:

Community service, as rendered by Mr. Bradder in this instance, represents a high type of citizenship. The boys of Pine Tree Troop will develop into leaders in forestry sentiment, assuring intelligent interest in the growing of white pine. One of the principles which Secretary Wallace laid down to guide us in our campaign was that our work must result in continued protection of the pine after our program was completed. There is no better way to do this than through the younger generation. Of course, the blister rust control agent's first duty is to get the Ribes out and obtain primary control of the rust. Any secondary activities must be carefully regulated.

S. B. Detwiler

Mr. C. C. Perry has finished the preparation of a written plan governing the cooperative blister rust control work in Massachusetts, in accordance with Dr. Martin's memorandum of April 25, and is now developing a current working plan along the lines suggested in the sample plan sent to state leaders. He has carefully prepared a comprehensive statement from which anyone desiring information on the cooperative work in Massachusetts can obtain an intelligent understanding of the work. Mr. Perry's plan is the first to be received and he is to be congratulated on the promptness with which he has prepared the written plan of work for Massachusetts and the excellence of the statement.

DO YOU READ THE JUNKMAN'S JOURNAL?

By Rev. F. K. Brown, W. Brattleboro, Vt.

There is a story writer who goes once a year into a book-store and sells his own and other men's books in order to go back to his study and write better books. And he does, too. It pays him to stop being an author for a while to become a tradesman.

The specialist will become a more useful and inventive specialist by refusing to be cramped in all the time with his own, particular job. There are highly paid specialists in law in a certain large insurance office who have become chained to their jobs to such an extent that they have made themselves into slaves. They know nothing else but their one little portion of a job. They tremble when a door opens for fear they are going to lose their jobs. They are over-specialized. They have made themselves slaves. They have unfitted themselves to be explorers, discoverers, inventors. They are specializing inward, not outward; downward, not upward.

The specialist who does the big jobs is the man who has the ability to get out of his own compartment and put himself now and then into the other fellow's compartment. A noted specialist in petroleum one day studied his bible with the same attention that a clergyman would give to it. When he came to the story of Moses in the bullrush boat he read that the boat was smeared with pitch.

"Pitch?" he queried, his specialist's nose on the scent of a new discovery. "That should mean the presence of oil."

An expedition was made to the Nile and there were new oil wells in Egypt as a result.

Don't think bugs all the time if you specialize in bugs. A butterfly hunter went to Africa recently on the hunt for a rare specimen of butterfly. He didn't find it. But he allowed himself to be interested in a side issue, and opened up the largest natural game preserve known to the world!

Real specialists--the men who make the biggest advances to knowledge--are always many-sided. Scott was equally famous both as novelist and poet. Angelo was equally famous as sculptor, painter and architect. Roosevelt was noted as statesman and naturalist.

For your work's sake, if you are a plumber it will pay you to read the junkman's journal. Don't let details chain you. Every other man's life and work has in it, somewhere, some clue or inspiration that can enlarge your own life work.

THE PATRIOTISM OF LABOR.

It is seldom that one can consciously combine patriotism and self interest. Our patriotism often must be manifested by a sacrifice. In fact we commonly think of patriotism as giving to our country - our time, money, lives. Or else we think of patriotism as a sentimental state resulting from consciousness of benefits received. Seldom do we associate patriotism with the unromantic routine of our daily life. What possible connection can there be between patriotism and raising potatoes, milking cows or perpetuating our forests?

But the connection is there. While we raise potatoes, milk cows or perpetuate forests primarily for our individual gain we, at the same time,

contribute to the wealth of our neighbors. If we produce in abundance and of good quality the necessities of life or its luxuries we contribute just so much to the prosperity of our community. A country is not a large community organized for the common welfare and depending upon the efforts of each individual member to contribute his share to the common prosperity. The patriotism of labor lies not in the immediate gain to the individual but in the production of something useful to the community.

White pine is a useful crop. It is a crop for which there can be no substitute. Brick, stone, cement, iron, all have their uses. They have supplanted wood for many kinds of construction. Yet, there is more wood used now than ever before in our history and there is no indication of a decreased demand. Of all wood, white pine stands supreme for certain building needs. It is light, strong, even textured, easily worked and above all it will stand exposure to weather as will few other woods. There are other uses outside of the building trade for which white pine is indispensable and which contribute to the high price the wood brings in the market.

White pine is getting scarce. It is not alone that we in the United States are using annually four and one-half times the amount of wood we produce and that the white pine has born the brunt of this demand, but there is an even far greater menace to the white pine crop in the form of a fungus parasite that, if not controlled, will wipe out the present young growth, seriously injure the older trees and probably prevent the future production of the crop. It may take ten or more years before a serious economic loss is felt in all pine sections. But the menace is here and 80% to 90% of some stands are now beyond help.

In certain towns in Vermont probably 10% of the reproduction is infected at the present time.

Here is a situation calling for some homely patriotism. We have a crop, the value of which to the state is partially realized. This present crop is seriously threatened and a future production probably impossible on areas not protected. The crop is a national asset as well as source of private income. Control of the disease is inexpensive. What will we do about it?

If we really wish to practice some practical patriotism; if we wish to benefit our community as well as ourselves, the opportunity is present for us in this situation. There need be no outlay of money for those who are not in a position to do so. An owner can protect his pines at no expense other than his own labor or that of his hired help in slack seasons. A complete removal of all currant and gooseberry bushes throughout the pine and for a surrounding distance of 900 feet will give ample protection. For the sake of time and labor saving, it will pay the owner to consult the State Forest Service for practical suggestions on the best methods to use, that will be invaluable in the conduct of the protection work.

To act now and save a personal loss and at the same time do a real service to your country and your community might be called practical patriotism.

Anon, Vermont.

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Mr. W. J. Endersbee, in his report of work for May 5 to 17, states:

"Wednesday afternoon Frost and I drove to Augusta, stopping on the way at the Brunswick infection area. There is very little fruiting this year but I saw two large stem cankers on pines of 10 inch diameter at the point of entry, one of which is fruiting a little and the other had fruited but is now greatly gnawed by squirrels. One of the trees was extremely interesting to me because the spores are breaking thru very thick bark."

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GETTING THE RIGHT ATTITUDE TOWARDS BLISTER RUST CONTROL.

We want our men to feel that there is more in their jobs than putting in so many hours labor and receiving a pay check in return. The following is handed to each man when he is employed in Blister Rust Control Work in New York.

"Wood is almost as essential as food to our daily welfare. Those who come after us must have wood. Already our nation faces a shortage of wood. Today twenty times more wood is being consumed in New York than the State is growing. More wood must be grown in New York. There are 4,000,000 acres of idle and waste land in New York which should be growing timber. Much of this land was once covered with as fine White Pine timber as ever grew. This land should be growing White Pine. White Pine should be grown because it is one of our fastest growing forest trees. The wood of the White Pine has a greater variety of uses than that of any other tree.

"The White Pine is subject to a very serious disease, the White Pine Blister Rust, and unless controlled the commercial growing of White Pine will cease. By accepting employment in the work of controlling the White Pine Blister Rust, you are assuming the responsibility of something more than a mere job. You are becoming a unit in a great big organization - the Conservation Commission.

"The Department of Lands and Forests in the Conservation Commission is devoting its energies toward protecting and increasing the forest area in New York. More and better forests will mean more industries in many communities, more game, better fishing, better climate, more people from the cities using our forests.

"You are agreeing to help in one of the biggest and most important of all enterprises in our country. There is more in it for you than your salary. By doing your bit and doing it the best you know how, you will have the satisfaction of having helped to make New York a better State in which to live and having performed a service of everlasting value."

H. H. York
New York

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NEW YORK'S TRAINING SCHOOL FOR FOREMEN.

Dr. H. H. York has sent in a copy of a circular letter to prospective foremen in Blister Rust Control, concerning the field training school which was to open near Schroom River on May 19.

Entrance conditions are noted in 10 brief paragraphs. If other State Leaders have not yet seen this Circular letter of May 9, 1924, I would suggest their writing Dr. York for a copy of it.

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NEWS FROM RHODE ISLAND

The filibuster in the Rhode Island Senate has held up the Blister Rust - Gypsy Moth bill and other annual appropriations. There is little hope of it passing shortly and when it will pass is a matter of much speculation. Those state employees that are working are doing so with no pay. I have been fortunate in re-employing the same scouts which were employed last year. They commenced work in the field May 1st, and in spite of the excessive rain and other depressing factors such as no pay, we have made some progress. I cannot vouch for the length of time that I can keep them good natured however, but certainly hope to clean up the greater part of R. I. white pine land which remains to be protected this year.

How many states can employ scouts under the assumption that if the annual Blister Rust bill does not pass they will not receive pay for their services?

O. C. Anderson.

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THE DIARY OF A RIBES HOUND.

Although I was convinced from the first of the Blister Rust menace, it took a full year of campaigning as an agent before I became sufficiently obsessed with the matter to put it across in the face of the general opposition of pine owners to the need of Ribes eradication.

Before tackling Blister Rust I had been working for some three years on general forestry work for the state and had come to recognize fire control as the all important problem in forest protection. During these years a scattering of Blister Rust control jobs were mixed in with fire control, re-forestation, mapping and the rest of the duties of a district forester, and I must admit that at the time I did not give Blister Rust the thought and energy it deserved.

There came a time when the depletion of funds of the forestry department necessitated my choosing between a lumber camp job until the new appropriation came in or else a change to a new district as a Blister Rust agent, and as the latter carried an advance in salary I chose to be shifted across the state as a stranger into a strange land, thus is the lure of the almighty dollar.

The first year was hard sledding and even discouraging, for it happened that I chose for my first town one which was inhabited by a veritable clan of Scotchmen whose characteristics are traditional. It had been hard leaving the old district where I had some pet projects under way and each time I struck one of the hard headed penny-pinching owners of that town I would have fond visions of the good old days back in Bennington and Rutland Counties, where there was plenty work to do and one didn't have to talk himself hoarse convincing people of its necessity.

My attainments during that first season in the securing of cooperation were anything but brilliant but during the ensuing winter I did a lot of thinking, reading and looking around, and the next spring found me looking at the matter from a different angle and approaching pine owners in a different manner. The system worked. I found that I could talk them into cooperating. It was encouraging and each time I tucked another signed agreement into my files it gave me new energy. A statement of the acreage eradicated for that season wouldn't take one's breath away by any means, but I had found myself and was thoroughly sold to the Blister Rust cause, and the areas of heavy infection I had seen added strength to my belief.

Another winter passed during which I did all I could to bring the pine owners of my district to my way of thinking, and this spring finds me up to my neck in Ribes eradication work and eating, drinking and sleeping Blister Rust. It's a great opportunity to my first belief is worthy of a fellow's best efforts and energy. and contrary

I sometimes tell my own story to an antagonistic pine owner and assure him that his conversion will follow in the same manner in the course of a few follow-up calls - and what is more it generally does.

W. E. Bradder,
Agent.

(When George Washington, at 17, was thwarted in his ambitions to become a sailor he was bitterly disappointed. But it gave him the opportunity to become the savior of his country, in the same way that Bradder has become the Protector of the Pines. Editor.)

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KEEPING A HANDY NOTE BOOK FOR IDEAS.

During the month of May I was engaged in a White Pine and Ribes survey in eastern Nebraska. In connection with this work it was suggested by Mr. Detwiler that a Notebook of Ideas would be a good by-product of the trip.

Where did I pick up ideas for our work? Any place and every place. Some of them came to me while riding in the caboose of a freight train, some came from advertisements in windows, some from magazine articles, some from chance remarks of people I talked with. Leisure moments, when not actively engaged in the house to house survey for Ribes and pine, I concentrated on our blister rust protective work in the Eastern and Lake States, and I was agreeably surprised some times to pick up constructive ideas out of thin air. Getting these ideas down on paper helps clarify them, so I put them down, whether the ideas were full grown or just sprouted.

Not all my ideas have the same value. Some may be found on further consideration to be impossible of application at the present time, some will need considerable thought to find their direct application. My notebook will bear fruit this year, I am sure, and of course that is the only reason for keeping it, as an aid in my work.

Just for example, in talking to two Omaha boys, I learned that one of them visited Wisconsin every summer. This led to the thought that it would be advisable to write an article for the Midwestern and Lake States papers to warn summer tourists not to dig up white pine seedlings and take them home with them, because of the danger of introducing the blister rust into the home state.

As a practical help to you men in the field, I would suggest the value of your keeping a Notebook for Ideas.

As a suggestion concerning the possible contents of a field Notebook for Ideas, I included such notes as:

1. A new window display scheme applicable to blister rust control.
Idea secured from a colored crayon drawing in a real estate window.
2. Certain pine plantations to be photographed and information worked up into news stories. Idea from a conversation on the train with a leading dry goods merchant.
3. An interesting method of presenting up-to-date statistics on white pine and the blister rust. Idea from a blotter advertisement picked up in a hotel.
4. Number and title of a new bulletin on forestry or the blister rust, to be given cooperators who would be interested in the subject. Idea from conversation with people interviewed.
5. A clipping concerning a new line of publicity.

I am sure that such an " IDEA NOTEBOOK " will prove of increasing value. If composed of removable leaves, it will make it possible to file the individual notes, if this should be desirable in the future.

Roy G. Pierce.
Washington, D. C.

THE DU PONTS BELIEVE IN WHITE PINE.

Mr. W. O. Frost dropped us a card in April that the E. I. DuPont Company at Woodsford, Maine had ordered one hundred thousand (100,000) white

pinus from the Keene (N. H.) nurseries for their 1924 planting.

Edit. When a hard-headed business firm plants white pine on such a large scale, it is good evidence that control of the blister rust is practical and efficient.

PURE LUCK

A Blister Rust Control Agent came across a 200 acre lot of white pine in Dummerston, Vermont, and upon inspecting it, found wild Ribes and pine infection. He could find no one in the vicinity who knew the owner until he located the tax collector, who gave him the name of Professor C. N. Smythe of Dayton, Ohio. Whereupon the Agent penned a letter to Professor Smythe stating the facts, estimating the Ribes eradication cost of \$75-100, and enclosing a bulletin and an agreement blank, mailed it to Dayton, Ohio, trusting that the Postmaster there might ferret out the Professor without further address.

The Postmaster at Dayton was not puzzled very much, and associating Professors with the Colleges, he delivered the letter to the local institution. Right there, Lady Luck began to falter, for Professor Smythe was not known at the College. Finally the letter was referred to the oldest member of the faculty, a Professor Knight, who should have known Smythe had there ever been such a man on the faculty. But Professor Knight had never heard of him. On looking over the envelope closely, he noticed it was an official government message, and bore the name of a Blister Rust Control Agent and a Vermont postmark, which led him to take a chance and open the letter. To his great surprise, he found that it described the Blister Rust condition of his own property in Vermont, and urged him to protect his property from the disease as his neighbors had already done.

The Agent's surprise came when he received, some time later, agreements, signed by a Mr. Knight, of whom he had never heard, giving instructions to do all the necessary control work and setting no limit to the cost. A long letter enclosed set forth the facts as stated here, and expressed appreciation for the Agent's interest.

Who said "Seven Come Eleven!"

ROCKINGHAM COUNTY, N. H. CONSIDERS WHITE PINE A PAYING CROP.

The following appeared on the front page of "The Rockingham County Farmer" in February, 1924:

P I N E

A Crop Which Pays Well On Waste Land
& Means Prosperity for Future Generations

Photo
of Farm with
good stand of
pine in background.

WHY NOT INSURE A CONTINUED INCOME AND FUTURE PROSPERITY.

By: Voting to raise an appropriation for Blister Rust Control at your Town Meeting. Nine Towns in the County appropriated Funds last year.

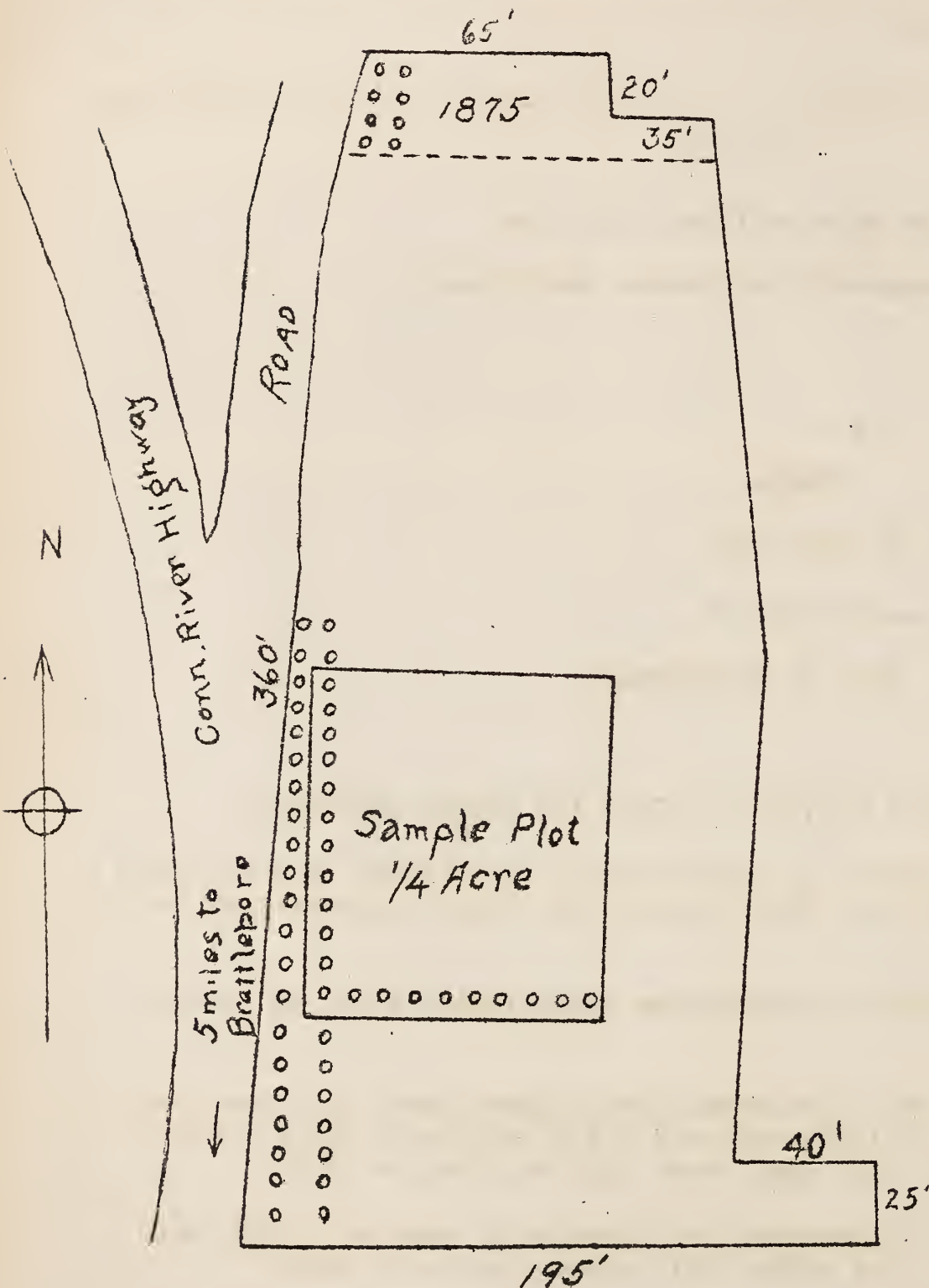
Twenty-six private co-operators appropriated funds to protect their pine.

30,550 Acres were "Protected From Blister Rust" this past year by the removal of 391,888 wild and 1,132 cultivated currant and gooseberry bushes. How many acres will be added in 1924?

The necessity of removing the ribes as a means of protection has been proven. What action will you or your town take?

A small immediate Tax will insure a continued Taxable source and Prosperity over a period of years in your town. Let's plan, build for the future, and insure one of the main sources of farm and town incomes by Protecting our White Pine.

- 24 -
 MYRON F. DUTTON PLANTATION
 OF WHITE PINE NEAR DUMMERSTON, VERMONT.
 (On "Pine Grove Farm", 5 miles north of Brattleboro,
 on the Connecticut River Highway.)



Planted

4 northernmost rows
 planted in 1875.

Balance in 1889 and
 1890. Number trees
 planted in 1889 and 1890
 was 487. Native stock
 used up to 3 ft. high,
 transplanted with balls
 of earth about root
 systems.

Spacing varies from
 7x12' at northern end
 to 10x12' at other.

Soil

Poor gravelly loam, on
 hilltop.

Quarter-acre Plot Data

Taken May 10, 1924

By J. E. Riley and A.
 E. Fivaz. Aver. ht. trees
 - 40' No. years planted -
 34 No. trees on plot - 10
 Sizes: - No. Volume

	(D.B.H.)	Trees	B.F.
	5"	2	24
	6"	8	160
	7"	17	476
White	8"	18	548
Pine	9"	19	336
	10"	18	354
	11"	21	1323
	12"	5	365
Red Pine	11"	1	---
	9"	109	4786

Six trees have been remove
 apparently died from com-
 petition in recent years.

Volume

4,786 B.F. per 1/4 acre
 or

19,144 B.F. per acre yield
 based on Forest Service
 volume tables for white
 pine in New England.

Messrs. Fivaz and Riley made a study of the Dutton plantation to determine how well white pine would grow on poor, gravelly soil in Vermont. The plantation was set out in 1889 to 1890 on top of a knoll near Brattleboro, Vermont. As shown by the above data these trees have made very good growth, in spite of the pessimistic predictions of Mr. Dutton's neighbors who thought it was a waste of time and money. A careful study of a quarter acre plot shows that these trees in approximately 35 years have produced a yield of 19,144 board feet per acre based upon Forest Service volume tables for white pine in New England.

Mr. S. V. Holden reports under date of June 11, 1924, that "the State Crew eradicated Ribes in this plantation and on a 900 foot protective strip around it in 1921. 190 wild gooseberry bushes were removed. No pine infection has ever been found in the plantation as far as I know. I found one 6-year old pine infected with blister rust in 1922. This pine was on the west protective strip about 300 feet from the plantation, and only 3 feet from a very large gooseberry bush, which was removed in 1921."

EXTRACTS FROM "THE FORESTRY BULLETIN".

THE SCHOOL OF FORESTRY, UNIVERSITY OF IDAHO, Vol. 1. No. 6, June 1924.

Comparison of Forests in the Grand Divisions of the Earth.
With Special Reference to Idaho Forests.

Continent	Forest Area	Ratio of Forest Area to World's Forest Area	Ratio of Forest Area to Total Area of Continent*	Forest Area per Inhabitant
	Million Acres	Per Cent	Per Cent	Acres
Asia.....	2,096	28.0	21.6	2.40
South America.....	2,093	28.0	44.0	32.45
North America.....	1,444	19.3	26.8	9.98
Africa.....	797	10.6	10.7	5.60
Europe.....	774	10.3	31.1	1.70
Australia and Oceania...	283	3.8	15.1	34.70
Total	7,487	100.0	22.5	4.35

*Not including the polar regions

These world-wide bodies of timber have in the past been much larger than they are at present. Exploitation and fire have made large forested areas barren, or at least have greatly decreased the density of the woods. The tendency of forest lands will be toward shrinkage as more fires, increased exploitation, and clearing of land suitable for agriculture continue. Coincident with this will be a gradually increasing demand for wood products. Our material development has been largely facilitated by an abundance of cheap timber and the future will rely upon it. The consumption doubles every 50 years and the development of wood substitutes does not keep pace with the constantly occurring new uses for wood. Closer utilization will make available products which before were wasted, but for final solution some factor of greater import must be sought. Rapid increase in efficiency of water and rail transportation makes it possible for nations poor in wood supply to import from foreign sources. To what great sources can these countries turn? Where can we Americans look for our wood when the timber shortage comes?

Only Siberia and the tropics still have great bodies of unexploited timber adequate for such demand. If reasonably well managed, the tropical

forests of Asia, Africa, the East Indies, and South America would continuously yield four times the present wood consumption of the world. There are reasons, however, for dissatisfaction in the fact of this. Experts agree that it will be a great many years before the tropics will supply a large part of the world's demand for wood. It will be a difficult problem ever to develop these forests.

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Even though great supplies of tropical timber might be available the fact remains that tropical woods are hard woods and it is to coniferous woods that the world looks for its construction timber. Seventy-five per cent of the wood consumed, exclusive of fuel, is from coniferous forests - forests found mostly in the north temperate regions. The great coniferous areas are northern Europe and Asia and our own softwood area in North America of which Idaho is a part.

The countries which may in the future export coniferous timber are Canada, Scandinavia, and Russia. Canada's great softwood forests lie mostly in the far North where growth is slow and stands are low in volume. Furthermore, much of the timber is pulpwood and her exports will be utilized by the British Empire. In Europe the timber exporting nations cannot hope fully to supply even the other European nations. This leads us to Siberia as the last resort and what do we find? Siberian forests are undeveloped and much of the area lies in the arctic region where a large timber crop probably never will be grown. Wood exports from Siberia will most likely go to adjacent countries having great timberless areas, especially China. Even though Siberia might be quickly developed, and that is problematical, all the timber that she could send into the United States would represent but a small part of our consumption and the transportation charges would be prohibitive.

It is clear that the bulk of our coniferous timber must be raised in this country and that all true forest land must be used for growing wood supplies. This obligation appears especially pressing when it is realized that we cut our coniferous saw timber 8.6 times as fast as it is grown. Idaho, being one of the great softwood production states, will find that this national problem is, to a considerable degree, hers to solve. If Idaho is to maintain her present position as a state which cuts and ships out to other parts of the country great quantities of lumber, if she desires to perpetuate the logging and milling industries which represent an investment of \$50,000,000, and employ two-thirds of the State's industrial population, then Idaho must maintain her forest lands in a state of continuous productiveness.

WESTERN BLISTER RUST WORK.

The black currant eradication program and work among the public schools got under way this spring in good shape in Oregon, Washington, Idaho and Montana. About 80 temporary employees will be engaged in western blister rust work this season according to a letter from Mr. Wyckoff.

The permanent personnel will be engaged in control reconnaissance, the application of local control, and the special experimental phase of the Western 10 year program to begin July 1st.

Quarantine Inspection.

Quarantine inspection work in the West has just been closed. During this spring's shipping season men were stationed at Moscow, Idaho; Seattle, Washington; Portland, Oregon and at various other points. No complete report has yet been received showing the total number of violations apprehended in the Western States.

Of the 63 violations of Quarantine 26, reported along the Mississippi Valley Quarantine Line, 60 were Ribes shipments, and 3 were of white pine. All of the pines were destined for Kansas. Of the Ribes shipments 44 were billed to the Great Plains States from Texas to North Dakota, while 16 were destined for the Rocky Mt. and Pacific Coast States.

A summary of the states to which these shipments were being made is as follows:

To California - - - 5	Oregon - - - 1
New Mexico - - - 5	Utah - - - - 1
Montana - - - 2	Wyoming - - - 1
Colorado - - - 1	

E X H I B I T S E C T I O N

PERMANENT EXHIBIT ALONG MAIN HIGHWAY PRODUCES RESULTS.

Mr. Holden, a Vermont Agent, has a permanent Blister Rust exhibit in front of his barn near Brattleboro, on the main Connecticut River Highway. The exhibit attracts considerable attention, both from local people and tourists, and has been the direct means of securing cooperation. A man and his wife stopped to look it over one day recently, and after giving them time to do the exploring on their own initiative, Mr. Holden went out to meet them. The man turned out to be a local lumberman reputed for his shrewdness and his ability to estimate standing timber, a "key man" for a certain group of pine owners. As he was very deaf, the Agent's part of the conversation was all carried on in writing, on the sheets of a field notebook. However, it was effective, for the lumberman signed up a small pine lot for Ribes eradication this season, apparently as a sample by which to judge the cost and quality of the control work.

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THREE WING PANELS WIN APPROVAL.

State Leader Frost writes--"The three 3-wing panels received sometime ago. Will say that they are the best yet and no doubt will prove satisfactory."

Edit. Twenty additional 3 wing panels are being made up and should be completed by the 30th of July. They will be forwarded at once, to the field men.

BLISTER RUST DEMONSTRATION BY AUTO

This spring, I am putting in some time in the maintainance of an auto exhibit. I have a Ford car with a light truck body and arrange the exhibit on the truck platform. A half dozen infected and fruiting trees in various stages to show the effect of the disease are nailed and wired in place and samples of local Ribes are planted in boxes. The material is plainly marked by tags and is replaced by fresh specimens as soon as it begins to wilt or grow shabby. A large placard, "White Pine Blister Rust Demonstration" is attached to the car, and a stock of literature placed within easy reach.

I use this car in the carrying on of my regular work of interviewing, inspection, etc., and it arouses a lot of attention and interest. It is surprising to note how quickly a crowd will gather and the questions they will ask. The agent gets plenty of opportunity to explain Blister Rust; often the only limitation is the preserving of his voice. One day about 2 o'clock I came to the scene of a public auction and backed the truck up near the crowd. Soon I was busy explaining and answering questions, and did not get away until after dark.

When I call on a pine owner, there is always a demonstration at hand for him to see, and while I am talking with him in the house perhaps, the exhibit parked on the roadside in front is being studied by all passersby. This demonstration is seen by many people that other methods or exhibits have failed to reach. A prominent land owner near Brattleboro, for instance, wrote to me the other day stating that he had seen the exhibit on the truck and as no one was around, had stolen some literature on blister rust. He said that he was cancelling an order for 150 cultivated Ribes, and wanted me to come up and look over the Ribes eradication job his men were doing on his pine grove.

The auto exhibit works long after official hours, as we purposely drive the truck rather than the passenger car when we go anywhere, parking it in advantageous places.

S. V. HOLDEN, Brattleboro, Vt.

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EXHIBIT WELL ADVERTISED

F A R M E R S and W H I T E P I N E
O W N E R S -

-- an invitation is hereby extended
you to come into our store Fricay,
the 14th! Tomorrow

WILLIAM T. ROOP-

Essex County Federal Agent for Blister
Rust Control, will be here all day to
show you how to SAVE YOUR WHITE PINE
CROP. IMMEDIATE ACTION IS NECESSARY
to protect our pines from BLISTER
RUST!

NOTHING TO SELL! NO OBLIGATIONS!
JUST VALUABLE FREE SERVICE AND ADVICE.

We have given the free use of our
show window and store for you. Come
in and see if the government can help
you!

H A N S C O M H A R D W A R E C O .
Tel. 48 30 Main St. Tel. 49

The Haverhill , Mass. Evening Gazette
of March 13, 1924

Q U A R A N T I N E S E C T I O N

NEW JERSEY LIFTS QUARANTINE AGAINST PENNSYLVANIA.

Notice has been received that effective May 1, 1924 the state of New Jersey lifted its blister rust quarantine against Pennsylvania allowing the entry of five-needled pines. As it now stands the New Jersey blister rust quarantine prohibits the entry of white pine from the New England states, New York, Michigan, Minnesota and Wisconsin. The amendment of the New Jersey quarantine is as follows:

"Whereas, a dangerously injurious disease known as the White Pine Blister Rust caused by a fungous parasite known as Peridermium strobi, Kleb., no longer exists to a dangerous extent in the State of Pennsylvania, therefore I, Alva Agee, as Secretary of Agriculture of the State of New Jersey, by virtue of the power conferred upon me by Chapter 268, Laws of 1916, State of New Jersey, hereby amend the Department of Agriculture quarantine effective on April 16, 1917, to be non-effective for the State of Pennsylvania.

"This order shall take effect on the date thereof and remain in full force and effect until further order.

ALVA AGRE,
SECRETARY FOR AGRICULTURE."

QUARANTINE INSPECTION NOTES

Mr. L. W. Hodgkins has sent in a very interesting quarantine inspection report from Kansas City, Missouri. Extracts from this report follow:

"The shipping season opened earlier than previous years, and many shipments were moving by March 1st. It was reported by the transportation agencies that shipments were fairly heavy during the last two weeks in February. The shipments for the entire season were much heavier than for several seasons back. There was also an increase in violations over last year.

"The willing cooperation of the officials in charge of transportation was again very evident; and the machinery for turning back violations worked with precision. Violations of nursery inspection laws were very evident.

"Many more shipments of nursery stock passed through this gateway than has passed here in any one season for the last three years. This would include both the nurseries east of the quarantine line and the nurseries west of the line. In the last four years the western nurseries have nearly doubled their yearly output; at least this would be a reasonable estimate from shipments seen in transit at this point.

"The shipments containing contraband plants were returned to the shipper by the transportation officials, except in one case, and in this one the contraband plants were taken out and destroyed and the shipment sent to the consignee. The shipment was from Maryland/^{and} the contraband plants were currant bushes. This was done by the express company to save expense of handling and a long haul. Approximately 40% of the violations were from private parties.

"The season has been very interesting and I believe a most profitable one. The more educational work that can be done on the firing line, the better for all concerned.

Personnel:

L. W. Hodgkins, Mar. 1st to April 19th

H. J. Ninman, March 6th to March 21st.

R. A. Sheals, March 25th to May 10th.

Number of inspections made:

Parcel Post 14,623

Express 1,656

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Mr. H. J. Ninman was transferred to the inspection work at Omaha and Council Bluffs after leaving Kansas City.

Mr. Ninman notes among other things at these points that:

"According to statements of assistants at the various stations, shipments of nursery stock this spring were not as numerous as in previous years during the spring season. Freight shipments were especially light. Express shipments were considerably reduced compared with previous years, and parcels post shipments were somewhat lighter than usual.

"Only three violations, all Ribes, were intercepted, one at Council Bluffs and two at Omaha. Of the three, two were found in parcel post and one in express, all being shipped by private parties.

"It has been found that the large nurseries of Iowa are co-operating with nurseries of Nebraska. The latter are growing Ribes and a few white pine for the former. Shipments across the quarantine line with respect to these plants does not seem to be extensive.

"As far as I could find out, there seems to be no important antagonism regarding Quarantine 26. On the contrary, I hear many favorable remarks regarding the enforcement of this quarantine. People are becoming more interested in controlling plant diseases.

P E R S O N A L

Massachusetts

Dr. Arthur W. Gilbert, Commissioner of Agriculture (State Blister Rust Cooperator) Massachusetts is expected to return from abroad on June 7. Dr. Gilbert was the leader of the American delegates to the International Institute

of Agriculture which was held at Rome, May 2-10. The International Institute established in 1905 was organized" to become the great clearing house of knowledge needed to maintain our agriculture".

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Mrs. Clave presented our friend Bill Clave (Massachusetts) with a nine pound youngster on April 2. Bill reports that the lad already has a strong grip and will make a great "Ribes hound" when he grows up.

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Mr. Clifton A. Sibley a senior at Northeastern University School of Engineering, was presented with a gold medal as first prize, following his presentation of an illustrated talk on the white pine blister rust and its control. Sibley made his debut in Ribes eradication work, in Essex County, Mass. last year and Mr. Roop is very glad to have him in his organization again this year. We predict a bright future for our friend Sibley.

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Mr. G. S. Doore was appointed on April 16 to take over blister rust work in District VII Franklin - Hampshire (North) Counties, Massachusetts. The resignation of Agent Morse took effect on April 30.

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Our "Old Timer" "Jake" (F.E.) Gould "wintered" in Florida in company with his son R. O. Both have returned to "God's Country" and Ribes for another season in Essex County, Mass.

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General

Mr. Hastings P. Avery, Chief Clerk in the Washington Office, and Miss Edwina Austin of Washington were married June 11. They left immediately for Boston to spend their honeymoon. Congratulations are in order.

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Mr. Roy G. Pierce, of the Washington Office, returned to his headquarters June 3, after a month's trip to Nebraska where he was engaged in securing data needed in an educational campaign against black currants.

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Mr. H. J. Ninman, of Wisconsin, completed his quarantine inspection work at Omaha on May 10. From that date he assisted Mr. Pierce in Eastern Nebraska, until June 7, when he returned to his headquarters at Madison, Wis.

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Mr. E. C. Filler, of the Boston Office, arrived in Washington June 6 for a conference.

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Mr. R. C. Stedman, artist in the Office of Horticulture and Pomology has been temporarily assigned to this Office. He is now at Kittery Point, Maine making several paintings which will be used in a Blister Rust panel exhibit for the West. Mr. S. B. Detwiler accompanied Mr. Stedman to Kittery Point on May 9 - 10, to plan Mr. Stedman's work.

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Mrs. Sarah T. Gray, Clerk in the Washington Office, has taken leave without pay for 3 months commencing May 31. She will be visiting in Texas during this time.

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Mr. S. B. Detwiler is Chairman of a Committee, appointed by Dr. W. A. Taylor, Chief of this Bureau, concerning the observance, within the Bureau of Plant Industry, of State and National Quarantines relating to the distribution of plants. The other members of the Committee are Dr. Haven Metcalf, Dr. L. C. Corbett, Mr. Henry E. Allanson and Mr. Roland McKee.

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Miss Maude A. Thompson has recently been appointed Plant Quarantine Inspector, having recently passed an examination of the Civil Service Commission for that position. She will continue, however, to work in the Washington Office.

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Dr. R. R. Parker, formerly connected with early blister rust control work in Massachusetts, is still interested in our work. He is located at Hamilton, Montana, where he has charge of the spotted fever tick eradication campaign.

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Appointments

Mr. Robert S. Caruthers has been appointed Field Assistant, effective June 16. He will first assist Mr. Posey in summarizing the statistical work in the Washington Office, and later will go to North Hudson, New York to work on the Demonstration Control Area at that place.

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Mr. Fred P. Yeaton received his appointment as Agent May 1: and Mr. Henry M. Storah his appointment May 5 - both to work temporarily in Maine with Mr. Frost.

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Mr. K. K. Stimson has been appointed to assist Mr. Filler in the Boston Office.

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Recent appointments in the Washington Office:

Mrs. Elizabeth S. Buskie - Typist, May 5;

Miss Alma Bishop - Clerk, May 5;

Miss Virginia W. Sargent - Clerk, June 2.

Resignations

Mr. Robert M. Hick, Agent in Connecticut, tendered his resignation to take effect May 31. Mr. Hick has accepted a position with the forestry Department of the Massachusetts Conservation Commission.

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Messrs. Walter H. Kee, Cecil H. Hatton and Carl O Peterson, Field Assistants in the West who were engaged in quarantine inspection earlier in the year, resigned during the first half of May.

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PERSONAL NOTES FROM THE OFFICE OF FOREST PATHOLOGY.

Prof. Ellsworth Bethel is just finishing his paper on the Pinon Blister Rust. He has been working on this disease for a number of years and his complete results on this rust which is so similar to the White Pine Blister Rust will be very interesting to the western blister rust workers.

Dr. Colley's paper entitled "A Biometric Comparison of the Urediniospores of Cronartium ribicola and Cronartium occidentale" has been accepted for publication in the Journal of Agricultural Research.

Dr. Pennington's paper entitled "Relation of Weather Conditions to the Spread of White Pine Blister Rust in the Pacific Northwest" has been submitted to the Journal of Agricultural Research.

Dr. Perley Spaulding checked up the Wilmington, N. Y. and other experiments in May. He expects to spend most of the field season in New York and New England.

Dr. John S. Boyce and H. G. Lachmund are working on many different phases of the blister rust in British Columbia. Dr. Boyce has two men, James L. Milke and Warren Benedict assisting in collection of data on the pines.

Mr. Roy G. Pierce (loaned to this office for 4 days in May) has recently studied the Peridermium harknessii infection in the western yellow pine

plantations on the Nebraska National Forest. Unlike Cronartium ribicola, P. harknessii spreads from tree to tree. A program of removal of Peridermium galls is being tried out.

P U B L I C A T I O N S

Blister Rust Control

Anon. The Report of the Blister Rust Control Conference, held at Boston last February, has been mimeographed and recently distributed to blister rust employees. In case any of the field men did not receive this report kindly write the Washington Office for a copy.

Barss, H. P.

The Menace of the White Pine Blister Rust. Biennial Report, Board of Horticulture, Oregon. 17:220-226, 1923.

Eastham, J. W.

White Pine Blister Rust. Annual Report British Columbia, Depart. of Agriculture. 17: 67 - 68 -, -1923

Forestry

Greeley, W. B.

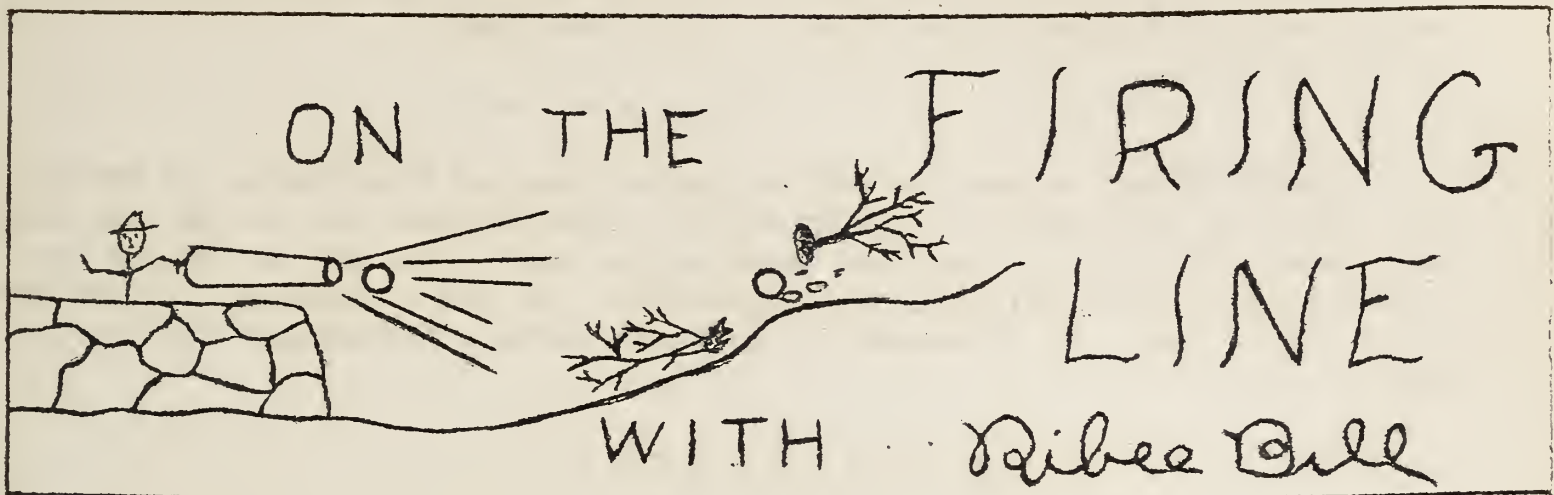
Idle Land and Costly Timber, Farmers Bulletin No. 1417 April 1924

NOTE: (A copy of this is being requested sent to each Blister Rust Employee)

YOUR QUESTION ANSWERED - - - - -
Any question of general interest will be answered in this column;
Address your letter to the editor.

Q - Is it within the federal regulations to write the name, title and address of the sender on penalty envelopes, tags and stickers?

A. - Yes it is within the regulations to write the name, title and address of sender on penalty envelopes, tags and stickers if the sender be a federal employee or collaborator. It is suggested that a rubber stamp be used if the senders' headquarters are somewhat permanent.



The Green Mountain Boys Hold the Fort! True to tradition, they can be counted on to do their bit in full measure. The size and quality of this issue will deceive you as to their numbers - but really, with the state leader, there are just enough of them for a quartette. But you should know that there is also a wives' quartette which renders valuable assistance, and a fine childrens' quartette of which great things can be expected.

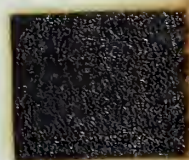
There are several ways of getting more results accomplished in the same amount of time, but friend Holden has found one of especial importance in his Auto Exhibit. His wife said that at the auction he tells us about, his outfit looked like the only lemonade stand on a hot day at the circus. Mrs Holden, on such occasions, usually mixes incog. with the crowd, and not only studies the attitude and reaction of the farmers to S. V.'s explanation, but often also gets a chance to make a stand for blister rust control in some of the local discussions that start within the group.

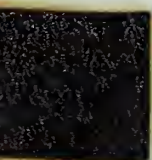
Even the children take a part in the work. While I was visiting the White River district last season, the youngest member of the Rose family was somewhat restless. I claimed she was teething and prescribed a teething ring, but Mrs. Rose assured me that the child was restless simply because they had not been out "chasing cooperation".

All the Blister Rusterettes are not found in Vermont, however, New Hampshire evidently has some, judging from some of the weekly itineraries and BRE2 reports. These reports are correct and complete, neatly made out and are received on time from districts where reports did not use to qualify so well before the Agents in charge annexed partners.

We are especially favored in this issue of the News by an editorial contributed by Reverend Frederick K. Brown of Brattleboro. Rev. Brown is the first writer as far as we know who has successfully used the blister rust control idea as a part of the plots of short stories.

Agent Holden is very modest in his writing on "The Small Job Problem". Last season he successfully supervised crew eradication work on 58 individual small jobs, carrying on interview work at the same time, so we thought that he must have an easy solution of the problem. He had a formula, alright but not an "easy" one. It is summed up in three words - "Planning" and "Hard Work."





BLISTER RUST NEWS



JUL 15 1924

U.S. DEPARTMENT of AGRICULTURE

Office of Blister Rust Control.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry
Washington, D. C.

THE BLISTER RUST NEWS

Issued by the Office of Blister Rust Control,
and the Cooperating States.

NEW HAMPSHIRE NUMBER

Vol. 8, No. 5.

July 15, 1924.

"Hello there, Agent."

"It is some time since I've dropped in to see you, isn't it. How is the world using you?

"So its the lack of trained scouts that gives you that glum appearance. Was worried myself, when I shook hands with you, for fear that your best friend had passed out. Glad to hear that its only a trifle.

"Sure, thats what I called it, just a trifle. Why you have a bunch of land that needs scouting, plenty of men to train, and right in this very district one of the best men to do the trainin - - -

"Where is he? Oh, so you don't know who I mean; surprised to hear you haven't located him. Well, he is here in the district - but lets look over some of this scout work before I put you wise to him.

"The pine lot just over that stone wall? Alright, lets look it over. No brush, pretty slick place to work. Few Ribes, too, and all seems to be located along that creek bottom and the walls. How much of this kind of work have you lined up, Agent? Enough to keep your scouts going till December, I suppose, same as that man up in District 3. The fellow in District 4, on the other hand, plans to clean up all his town work and most of his other jobs by the last of August. Good idea to get the bulk of the eradication done early while the Ribes are in full lead and before the vegetation gets too thick. Yes, I will admit, he has more scouts than you have, but he started in without a one. He believes in having two scouts on the average with nearly every crew.

"How did he get them? Oh! he had'em trained by the best man for that work in his district, and believe you me, they know their stuff.

"Say, Agent, remember when you first came on blister rust work, and Brother Hodgkins or some other experienced scout gave you your first steps in scouting? I'll bet that after these two or three years of practice over your district, there are darn few, if any, little wet gullies way up near the stream heads that you are skipping while checking over the work of your scouts. Don't blame you a bit for the pride you take in being able to look the ground over right. The fellow who first showed you had the same just price in his ability to scout, but he also prided himself on being able to impart his knowledge of the game to others, even as he did to you.

"Well, Agent, I see by the grin on your face that you have located that best man to train your scouts, so I'll chase along. Hope that you pick some good men to break in, and catch up with your advance scouting in a hurry.

Yours to the last root,

Ribee Bill

Week Beginning Monday, July 14, 1924.

THE GRANITE STATE BLISTER RUST ASSOCIATION

Present

A One Act Tragedy

entitled

Down! Down! Down! Will Come The White Pine Trees
unless

Up! Up! Up! Come The Currants And Gooseberries.

(Founded on an event which occurred in the Baltic Provinces of Russia)

* * * * *

Cast of Characters

J. H. Foster, State Forester

J. C. Kendall, State Director of Extension

J. M. Corliss, Asst. State Leader.

L. E. Newman, State Leader.

Blister Rust Control Agents

F. J. Baker-----Cheshire

S. H. Boomer-----Carroll

J. J. Fitzpatrick----Belknap

D. B. Keane-----Sullivan

H. W. Robb-----Hillsboro

K. E. Barraclough----Rockingham

W. J. Cullen-----Strafford

T. L. Kane-----Northern Grafton

T. J. King-----Merrimack

G. F. Richardson----So. Grafton

E. J. White, Inspector

I. B. White, Chief Clerk

"Mr. Jones" - A County Agricultural Agent.

* * * * *

Synopsis of Scenes

ACT I

Scene 1 - Place: A County Farm Bureau Office

Time : Late Afternoon; One Year Ago.

Note: The curtain will be lowered for 5 days between Scenes 1 and 2.
(The audience will confer a favor upon the management by exercising patience)

Scene 2 - Place: Office of Forestry Commission, Concord

Time : Monday morning, five days later.

Acknowledgment

The properties used in Scenes 1 and 2 were furnished through the courtesy of

The New Hampshire Forestry Commission
and

The County Farm Bureau

The automobile used in Scene 1 was furnished (for a consideration) by the
Motor Company, Detroit, Michigan.

ACT I
Scene 1

(The State Leader is in conference with the County Agricultural Agent, the purpose of his interview being to make the preliminary arrangements for installing a Blister Rust Control Agent in that county. The A. A. is sympathetic and willing to do all in his power to put the project across, but has his doubts as to whether the proposition can be carried out to a successful conclusion in his district.)

Mr. Jones: "I tell you, Mr. Newman, there sure is a tough crow in this county. Not that the folks are really more backward or narrow than many places I've been in, but they don't take every Tom, Dick and Harry's say-so. Do you realize that I have been in this county going on three years, and I don't feel as though I had any more than dug myself in. Tell you what, I don't envy the Blister Rust Control Agent you are planning to send to this district." (The A. A. then launches into a long and detailed account of his experiences in trying to induce a certain community to take up a project in orcharding)

S. L.: "Look here, Mr. Jones, we're going to have a get-together of the Blister Rust Control Agents in Concord next Monday; why can't you plan to attend? There will be a discussion of the ways and means which these men employ to put their work across in communities just as tough as any you've got in your county."

Mr. Jones: "That sure is a good idea. I'll certainly be there."

S. L. "That's fine, I'll see you Monday morning; don't forget the hour; it's nine o'clock sharp."

Exit the State Leader, followed to the street by Mr. Jones, to assist, if necessary - and it generally is - in winding up that rattling piece of mechanism manufactured in Detroit, U. S. A.

Curtain

* * * * *

ACT I
Scene 2

(The Blister Rust Control Agents have assembled at the office of the Forestry Commission, and by invitation, the State Director of Extension and one of the Agricultural Agents are also present.)

- - - - -

State Leader: "By way of starting the ball a-rolling, I want to say that our meeting this month is for a two-fold purpose. In addition to the usual discussions on the various phases of our work, and exchange of ideas, we have a big proposition confronting us all. There is in our midst - winking at the Agricultural Agent - a skeptic, and it's our solemn duty to convince him of the error of his ways. As a matter of fact, Mr. Jones believes thoroughly in the necessity for Blister Rust Control, but feels that his county will prove the most difficult one in the whole State in which to put our program across."

(At this remark a grin illumines the otherwise mobile features of the Blister Rust Control Agents, for each firmly believes that his district presents problems more difficult in their solution than those of his colleagues.)

S. L.: "What particular phase of Blister Rust Control work, Mr. Jones, would you care to hear first discussed?"

Mr. Jones: "Well, I'm not entirely certain, for this business is all Greek to me. But I do feel that I would have a more intelligent grasp of the situation if an outline of the policy which governs your work was presented at the start."

S. L.: "While I had intended to give you an inkling of our general plan of work before we got through here to-day, still, nevertheless, I'm glad that you brought the subject up at this time for I believe that a resume of the principles upon which our activities are based may clarify points which otherwise might puzzle you somewhat. Inasmuch as I explained to you last week that the organization in this State is similar to that of the other States engaged in Blister Rust Control, it does not seem necessary to go over the matter again. I will, therefore, try to confine myself to the subject of:

THE NEW HAMPSHIRE BLISTER RUST POLICY

"Our objective is identical, of course, to that of the other States; namely, the protection of a forest crop, which in our opinion is paramount to any other species. Our belief as to who shall carry on the necessary control measures differs to some extent from that entertained by many of the New England States. Our contention is that the perpetuation of the White Pine crop is of vital importance to more than the individual, and is something which concerns the future welfare of the towns and the State. Inasmuch as the individual is not always sufficiently alive to the necessity of acting immediately in a crisis, we believe that the objective can be reached much sooner through a combination of State and municipal effort than by confining our activities to only educating the individual to the end that he and no other will apply the proper control measures."

"Prior to the advent of Blister Rust, a good many towns and cities had made appropriations for Gypsy Moth work. The Forestry Department felt that if communities could be induced to make available funds for the protection of their hardwood growth, they certainly would not be averse to providing for the preservation of white pine, since that tree is acknowledged to be of far greater value than any of the deciduous species. The Department also was of the opinion that the overhead entailed in initial interviews, preliminary arrangements, field expenses and the final supervision of the control work in small individual projects was too great in proportion to the areas covered. This contention has been proved to be a fact time and again by a comparison of the cost data of town

and individual projects. Furthermore, town control can be conducted without regard to property lines, and this fact contributes towards a reduction in the per-acre cost, thus permitting larger areas to be placed under protection."

"What is perhaps one of the greatest benefits derived from state-wide town control lies in the publicity secured, since an appropriation by a community requires that the matter be taken up at the annual town meeting, an occasion when a large majority of the local tax-payers congregate. During the period when control measures are under way the townspeople are much more apt to take an interest in Blister Rust activities inasmuch as it is their money, to a large extent, which is being spent."

"Therefore, since 1918, Blister Rust Control in New Hampshire has centered primarily around town cooperation, and secondarily with individual pine owners. I would not give the impression that we fail to encourage individual cooperation, for such is not the case. Since the inception of control work in this State, nearly 500 persons, firms and associations have appropriated sums ranging from \$2.00 to \$1,000. Where town funds are somewhat small, an effort is always made to supplement them with individual monies."

Mr. Jones: "Might I interrupt at this point?"

S. L. "Certainly, we are here to answer any questions which may occur to you, or make clearer any points which puzzle you."

Mr. Jones: "Just how do you go about it to interest towns in the work to such an extent that they make Blister Rust appropriations? I would think that several years work might be necessary before sufficient interest could be aroused to bring about the voting of funds for this work."

S. L.: "Your question can best be answered by the Agents who are present today. There are so many different angles from which one can approach this subject that I think if they are taken up separately you will secure a much clearer idea of the whole control program than if I attempted to summarize. Therefore, I am going to ask Mr. Baker, who is in charge of the work in Cheshire County, to tell you something of the results he has secured in:

WORKING WITH A COUNTY FARM BUREAU FORESTRY COMMITTEE

Mr. Baker: "Cheshire County has, I believe, the distinction of being the first county to appoint a Forestry Committee. Taking my district as a whole, the Blister Rust work has been accepted very well, but there are a few communities in which the attitude of the pine owners is not so good. The Farm Bureau Executive Committee felt that additional support might be given the Blister Rust Control Agent through the formation of a local group of men who would devote considerable time to the furthering of forestry."

"In order that such a body might function properly and successfully, it was necessary to give careful consideration to the selection of its personnel. It is believed four principal requisites are necessary in order that a man may qualify for membership in such a committee. He should be well known and respected, not only in his own community, but to some extent through the country as well. He should have an interest in Forestry and Blister Rust Control Work."

He ought to be affiliated with some forest activity, and above all, must be a live wire."

"We were quite fortunate in securing the cooperation of five exceptionally good men as members of this committee. The Chairman, besides running a large farm, is a judge of the municipal court in his home town. He has practiced woodlot management successfully for several years upon his own place. He is widely known throughout the County, having been President of the Farm Bureau for a number of years previous. The Secretary of the committee is a Forester for the New England Box Company, a concern that has been greatly interested in forestry for sometime, and that today is conducting many investigations in forest management. The balance of the committee is composed of a foreman of a wood-working shop; a lumber dealer, and a large woodlot owner."

"At a meeting last winter, of the Forestry Committee and the Project Leaders, a decision was reached to hold Blister Rust meetings in as many towns as possible. Unfavorable weather conditions prevented the Committee from having meetings in every town, but in spite of the elements, eleven programs were put on in as many towns, with a very gratifying attendance. Talks were given on Blister Rust by the representatives of the State Forestry Department, and members of the Committee. Through the cooperation of the Farm Bureau, a moving picture machine was loaned for these occasions, and films depicting Blister Rust control and forestry activities were exhibited. A general discussion followed the pictures and specimens of Blister Rust were shown."

Mr. Jones: "Has the Committee been engaged in any special activity aside from holding these meetings?"

Mr. Baker: "Yes indeed. Another of it's activities which I consider has been very helpful was a circular letter sent out to all Farm Bureau members. The letter reads as follows:

IMPORTANT NOTICE TO PINE OWNERS AND FARM BUREAU MEMBERS

It is very desirable that you attend Town Meeting, Tuesday, March 11th, as the question of an appropriation for Blister Rust Control will be brought up. In order to save the White Pine crop this work must be carried on.

Don't let your town fail to appropriate funds for this important work!

Remember! The State Forestry Department will increase town appropriations 25 percent. HELP SAVE THE PINES!

Mr. Jones: May I inquire how the activities of the Committee are financed?"

Mr. Baker: "The postage on these letters, as well as the necessary stationary was paid for by the Farm Bureau. In addition the Farm Bureau has offered to pay for any posters covering meetings that this Committee may hold from time to time."

This circular letter resulted in the support of the entire farm bureau. In one town, the article for Blister Rust was left out, owing to a misunderstanding, but through the efforts of two of the Forestry Committee, who happened to be at Town Meeting, the usual appropriation was made."

Mr. Jones: "This local Forestry Committee looks good to me, but I should think that only five men, regardless of their interest and activity, would need additional assistance in each town."

S. L.: "You are quite right. We have, in order to cope with this problem, borrowed an idea from the Extension Service, and with the assistance and advice of the Farm Bureau, Project Leaders in Blister Rust and Forestry are appointed in a good many towns. One of the agents has been particularly successful and has a project leader in every town in his county. I believe that you will be interested in his views on:

BLISTER RUST PROJECT LEADERS AND METHODS OF GETTING THEM TO FUNCTION

Mr. Cullen: "The same requisites must be considered in the selection of a Forestry Project Leader as were brought out by Mr. Baker in connection with the formation of a county forestry committee. The project leader is selected for the purpose of helping direct a certain important activity in his community. His work is to act as an intermediate between the Blister Rust Control Agent and the local people."

"In the late Fall and early Winter months the Farm Bureau holds meetings in the various communities throughout the county. At that time project leaders in many different activities are elected by the members of the local Bureau."

"A Blister Rust project leader must, primarily, be an aggressive person and also a pine owner. The Blister Rust Control Agent should spend some time in assisting this leader to become familiar with the rust in all its stages and, by taking him to one or more severe infection areas, show him the ultimate effect upon the pine crop if the disease is not controlled. While eradication work is underway in his community, or nearby, the project leader should be given an opportunity to view crew work, and learn to identify the various kinds of wild Ribes."

"If the prospective project leader possesses the right kind of qualifications, he will quickly realize the seriousness of the rust, and will exert himself in assisting in the accomplishment of its control. It is important that the man be well thought of in his community, otherwise, what he says will carry but little weight with his fellow citizens. Experience has demonstrated that until the work has been established in a town long enough for the Blister Rust Agent to have a definite knowledge of its individuals, no permanent leader should be elected. In some instances a temporary leader may be appointed a month or so before the planning meeting takes place. If the temporary man shows sufficient interest and initiative the community will probably elect him as a permanent leader."

"The theoretical duties of a project leader might be summed up as follows:

1. To discuss with the Blister Rust Agent the local problems pertaining to the project, and to assist in the formation of a community program of work.
2. To secure for the project the active support of the community by informing the residents regarding the necessity and purpose of the work.

3. To assist the Blister Rust Control Agent in arranging for and properly advertising local meetings and demonstrations.

4. To otherwise support and promote the control work in his locality.

Mr. Jones: "How much help, Mr. Cullen, have you found the Project Leaders to be in your blister rust work?"

Mr. Cullen: "Unfortunately, there is a wide difference between the theoretical duties of a project leader and the amount of work he actually performs. If the leader uses his influence in getting a good "turn-out" at the local meetings and give moral support to the work it is about all he feels that he has time to do. Of course the amount of assistance which I receive from these men varies tremendously with the individual."

Mr. Jones: "Do you rely to a large extent upon the project leader to put the program of work across, and do you call upon him often for aid?"

Mr. Cullen: "I believe that it is a better policy not to request too much of the local leader. If he is approached continuously he may fail to give help at the time it is most needed. It is also well to remember that the project leader can seldom be expected to act on his own initiative, and therefore, the agent should go to him with an outline of the plan of work."

"It is very important that the Blister Rust Agent furnish each local leader with all possible data regarding community conditions, such as the amount of infection, damage, results of eradication, etc. The leader, too, ought to know something of conditions throughout the county and state. The Agent should plan to call on the project leader whenever he is in the neighborhood, if only for a few minutes conversation. Such informal visits make the local man feel that he is being recognized and helps keep him advised as to the progress of the work throughout the county."

- - - - -

Mr. Jones: "By the way, Mr. Newman, I suppose you people work solely with the Farm Bureau, so far as organizations are concerned."

S. L.: "On the contrary, we make as great an effort to interest the Grange, Boards of Trade, Local Improvement Societies, Women's Clubs and schools as we do the Farm Bureau. While I suppose a good many Farm Bureau members are Grangers, not all Grangers are members of your organization. Then again, while a large percentage of the Farm Bureau members are pine owners, yet on the other hand but a small percentage of the pine owners are Farm Bureau members. Therefore, you can readily see that if we are to secure state-wide support in this matter, it is necessary to reach out and advise all kinds of organizations about our work."

Mr. Jones: "What success have you had with these organizations; do you find them willing to cooperate with the Blister Rust Control Agents?"

S. L. "I feel that considerable has been accomplished, and I have not heard of one case where any of these bodies have failed to lend their support when it was requested. As a matter of fact, the Forestry Department receives,

during the course of the year, a great many requests for speakers on various phases of forestry. In such cases, unless the presence of the State Forester is specially desired, the matter is turned over to the proper Blister Rust Agent, as it gives him additional contact."

"We felt it wise to divide Grafton County into two districts as it is the largest in the State. As the Farm Bureau office is located in the northern extremity of the county, the Agent in charge of the southern portion is not as closely affiliated with your organization as would otherwise be the case. Consequently, he is more or less obliged to seek other groups of people in order to put his program of work across. The Agent in Southern Grafton County, Mr. Richardson, has been very successful in his work with the Grange, and I feel certain that he can contribute much that is helpful and of interest to us all."

COOPERATION WITH THE GRANGE AND OTHER ORGANIZATIONS

Mr. Richardson: "When first taking over the work in this section of the County I felt it was important to place Blister Rust Work before as many people as possible. I realized that I was isolated to some extent from the Farm Bureau, and therefore, it was necessary to seek other channels in addition to what they could offer."

"A form letter was worked up and sent to the various Granges, Boards of Trade and the High Schools. In it the seriousness of the Rust was stressed, the general situation in the State and in Grafton County given. The letter also stated that the writer would be glad to speak at any regular or special meeting as this would afford him an opportunity to explain the nature of Blister Rust and control methods in greater detail. The letters sent to the Granges and Board of Trade mentioned that the State Forestry Department would be pleased to assist them in any local forest problems. The suggestion was also made to these two organizations that they form a Forestry Committee."

These letters, so far, have met with much success, for arrangements have been made to hold no less than 18 meetings with the Granges in different towns; 5 with High Schools, and 2 with Boards of Trade. At the present time 8 of these 25 meetings have already taken place.

Mr. Jones: "Have you any concrete case, Mr. Richardson, where these meetings proved instrumental in helping your work?"

Mr. Richardson: "Yes, I can cite at least one instance. Arrangements were made with the officers of the Grafton Grange to hold a blister rust meeting. The town of Grafton was far from being favorable toward control work. I made it a point to call on the three leading men of the town who were opposed to Blister Rust and got them to attend the meeting. True to their word, they came, and before our program for the evening was completed, became sufficiently interested to ask a great many questions. The following week, at Town Meeting, all three men voted in favor of an appropriation, and one of them gave a very good talk in support of the work. The vote taken at Town Meeting was ten to one in favor of control measures."

"The Committee idea, in the Grange and Board of Trade, has worked out very satisfactory. As soon as is possible, after the formation of a committee, I take

this group of men to some badly infected area; then show them a few infections in their own town, and conclude the demonstration by explaining how the rust is controlled. I find there is nothing equal to having two or three local men - whose word is respected - to spread the gospel of blister rust."

"Committees of this sort can also assist the Agent in staging field demonstrations in eradication methods as well as of damage. I also plan to secure the cooperation of the local project leader and the town inspector in arranging these meetings. I believe that similar cooperation can be secured from many other organizations, such as the Rotary Club, Town Improvement Societies, Women's Clubs, etc."

- - - - -

Mr. Jones: In the initial stages of this work, and also at the various meetings which the Blister Rust Agents hold, I should think that all sorts of illustrated matter and specimens of infected pines would be valuable in arousing interest. Do the Agents have any material which they carry around with them?"

S. L. "Yes, we have quite a variety of what one might term "portable" educational material which the Agents use in explaining to the public the nature of Blister Rust. In fact we lay a whole lot of stress upon the importance of each Agent having "convincing evidence" with him at all times. I was talking only the other day with Mr. Kane, who looks after the control work in Northern Grafton and Coos Counties, and he told me of some very interesting results which came about through carrying Blister Rust specimens around with him. In fact I was so much impressed that I requested him to jot down some of his experiences and give them at this meeting. After hearing Mr. Kane, I am certain the Agents will be as impressed as was I in the;

VALUE OF HAVING BLISTER RUST SPECIMENS AT HAND

Mr. Kane: "At the first conference of Blister Rust Control Agents, held in Concord, there were many questions brought up for discussion on the best methods to use in "putting across" our work. One item that escaped the minds of the "boys", but was considered a highly important subject in the State Leader's talk, subsequent to the discussion, was the value of having specimens of infected pine and ribes with you at all times."

"It occurred to me that this was a splendid idea, and worthy of a good deal of consideration. There have been occasions when I could have given a broader and more intelligent explanation of Blister Rust if I had had specimens with me. I resolved that from then on I would never be caught without them, while on the job. I remembered the story of the fellow who met with very poor results trying to sell the pig in the bag, and planned to fortify myself against any similar misfortune."

"One day, last winter, I was inspecting some pine lots in the town of Bethlehem. It so happened that I found some very good stem infections that day, and with the owner's consent, carried them back to Woodsville, my headquarters, with the purpose of showing them at the next Farm Bureau meeting."

"On the train that night were some representatives of the State Legislature, who were traveling to Concord to attend the session. Chance carried me into their railway coach, my arms loaded with these specimens, and you can rest assured I got many quizzical glances. Well, it didn't take long for the lawmakers to commence inquiries, and by the time I reached my destination, there was an interested group clustered around and listening attentively to my story of Blister Rust. Now the majority of these men had read considerable about the rust but had never witnessed any of the damage. It was a revelation to them. They told me that the sight of these specimens cleared up any doubt in their minds as to the destructiveness of Blister Rust to white pine. I felt then that my specimens had proved their worth, as these men were to vote on a State appropriation for control work."

Mr. Jones: "Do you recall, Mr. Kane, of any case in your County where a town appropriation can be traced directly to the exhibition of blister rust specimens?"

Mr. Kane: "Yes, indeed; I have one in mind and was just on the point of telling you about it."

"Of course you have heard of the town of Lisbon, in Grafton County? Well, Lisbon contributes a lot to the lumber industry, as it boasts of harboring one of the largest lumber companies in the State. Our boys talk a whole lot about their trips up here to see the second largest infection area in New Hampshire, but many of the individuals in this town have been reluctant to acknowledge this fact. It seems hard to believe, but last year at Town Meeting they gave expression to their opinion that there wasn't such a thing as Blister Rust in Lisbon. I made every effort to convince them of their error. I knew of one man who was opposed to blister rust and I didn't forget the fact that he had a large following who placed a good deal of faith in his judgment. Therefore, I took him on a trip to several badly infected pine lots; spent a pleasant day in his company, parted congenially, and went home feeling that I had convinced him of the urgent necessity for immediate action."

"Unfortunately, Town Meetings occur on the same day throughout the State, otherwise the Agents would have an opportunity to visit them all. It has been the practice to choose Project Leaders in the different towns to represent locally the Blister Rust work. We strive to coach these men in every phase of the work so that they will be able to answer at all times any questions which may come up. The Project Leader in Lisbon is a successful young farmer, possessed of Yankee grit and spirit, and carries around with him better than the average set of brains. He is a quick thinker and a good judge of character. He proved this to me on Town Meeting Day."

"I called him on the phone shortly after the meeting had adjourned so as to learn the result of the vote for Blister Rust Control, and also to thank him for this cooperation and interest. I said to him, "Well, Paul, I expect you have some good news for me to-night; surely, our influential citizen didn't give you any trouble this year as I put him on the right track."

"Be yourself", replied Paul, "your judgment of men isn't as keen as it should be, or perhaps you don't know this fellow as well as I do. I calculated this critter would kick up a fuss and try to convince the voters again that

there wasn't any Blister Rust in the town. So I came prepared to show him up. When he had uncorked his speech and sat down, I called the voters to gaze upon forty of the largest specimens to be found in these parts. You can imagine his surprise when I informed the meeting that I had collected them from ten different lots." "Yes Tom, the town appropriated this year, and those specimens were the direct means of bringing it about."

S. L.: "I believe Mr. Kane's experiences certainly prove that great strides may be made through a more constant use of infected specimens. I sometimes feel that we could, with increased benefit to the work, eliminate to a great extent many of the indoor meetings, provided, more field demonstrations were held. In one county or another events are continually taking place which, to my way of thinking, proves the truth of my statement. I feel so strongly regarding this phase of our work that I am going to request Mr. King to tell us something of his experiences and results in holding outdoor meetings in Merrimack County."

FIELD DEMONSTRATIONS OF LARGE INFECTION AREAS AND THEIR EFFECT

Mr. King: "We all strike snags at times. We all meet the apparently unconvincible party sooner or later. It is not always possible for an agent to properly demonstrate Blister Rust in its real light on each owner's property or even in his own town. Regardless of the ability of the agent as a talker there is often a notable lack of success. This, many times, is due to the ingrained skepticism of the prospect regarding the possibilities of Blister Rust. There is, however, a method of "getting to" this type of individual that is open to all agents. Exploit continuously areas where Blister Rust has had it's opportunity! There is something about human nature that "likes to be shown", and that old saying, "Seeing is Believing" was never more aptly applied to anything than it has been to the subject of White Pine Blister Rust."

"In demonstrating such areas, it may necessitate the Agent going out of his own territory in order to find the desired infection. It may sometimes involve a slight additional expense at the time, but the effect of such a trip is so far reaching as to reduce it's practical cost to a minimum. Anyone who has seen a real "honest-to-goodness" infection area cannot but repeat time and again to his neighbors and townsmen the story of what he saw. A half a dozen such men in a community are invaluable to the work."

"The value of such trips are especially noticeable where work is being conducted on the cooperative basis it is in New Hampshire. Four-fifths of the funds spent on actual eradication work in this State is furnished by the town; and the town appropriation is voted at the annual meeting by the townspeople. It is at Town Meeting that those who have seen a large and severe infection will, invariably, urge the desired action on the part of the rest of their fellow-townsmen. An agent can have someone boosting his work in all the towns throughout his county. And who can better represent him than one who has seen a severe infection? Even in States or sections of States where the town control methods cannot be practiced, the presence of one or several men of repute who have seen such an area is worth much for reference purposes in selling the work to those whom it may be impossible to take to such areas. All this does not mean that such trips should constitute the sole activity of an agent in a town. They serve, where practiced, as a solid foundation on which to work."

Mr. Jones: "May I inquire, Mr. King, how you go about to organize these field demonstrations? Also are they informal or do you make a specialty of them and advertise the affair in advance?"

Mr. King: "Where such a field meeting is to be held in cooperation with the Farm Bureau, we give it considerable publicity through the Monthly Bulletin, the newspapers, circular letters and posters. However, most of my infection demonstrations have been distinctly informal in planning and field procedure. I corral some of them and inquire whether they will put in their time against mine and secure a free automobile trip. I advise them that probably "so and so" will go along too, and that they can stay just as long or just as short a time as they care to. Even in this day, when "Fords" and automobiles are legion, a "free ride" generally wins them over."

"I have derived considerable satisfaction as a result of demonstrations of this nature. Skeptical, as well as interested groups have been taken to view the damage caused by the rust on both large and small pines. I always plan to indicate the following:

1. Effects of Blister Rust on mature and immature pines.
2. Success of Control Methods. (Note: Illustrated by showing an area where large pines are infected, and then calling attention to young trees which have since come up after the removal of ribes.)
3. Damage wrought by cultivated ribes.

"That a deep impression was made on those who saw these areas is evidenced by the following remarks made at the time:"

"It is plainly evident that the destruction of the currant and gooseberry bushes are the only preventive for White Pine Blister Rust. Let us destroy them at the earliest possible date! This will save for future use many thousands of valuable pine timber. The working of the disease is such that no medicine can be applied to kill it."

"I confess that I have been skeptical regarding White Pine Blister Rust, and I am a lumberman. But anyone who has seen South Deerfield and Hooksett infection areas cannot but be convinced of the seriousness of Blister Rust."

"It is quite apparent that this disease needs the immediate attention and cooperation on the part of all the towns."

"Had I not seen these infection areas, I would not have believed such a thing possible. The control work must be pushed ahead faster than ever."

"It is depressing. I want all the facts and figures concerning Blister Rust in order that they may be presented to the people at Town Meeting. We must get behind your work more solidly than ever."

"Without it's white pine New Hampshire would be a dreary waste, one of it's most important industries destroyed, it's resources immeasurably lessened, it's future questionable, it's people in a sad plight. Blister Rust certainly holds a threat toward this end that cannot be ignored. You must be upheld in your efforts to control it."

"I wish it were possible for everyone in my town to see these infection areas. Then there would be no question about the town backing up the work.

Mr. Jones: "Those impressions constitute some of the most remarkable testimonials I believe I have ever heard made on a subject of this kind. I suppose you secured ultimately something more than verbal support as a result of these demonstrations."

Mr. King: "Yes, we did get some results in a practical way. Opposition to Blister Rust was removed in four towns; the appropriations were doubled in two others, and sufficient funds were voted in two more to permit cleaning up the entire town area in a single season."

"In one town, a move was launched to reverse the favorable action taken by the voters at the regular town meeting. The situation was finally saved by the combined work of scouting the town thoroughly, and a trip to two large infection areas. The person who was responsible for starting the movement completely reversed his stand in the matter, after seeing these areas.

"I must admit that I am beaten," he said, "for it would be a calamity if conditions, such as we saw on this trip, were allowed to develop in our town. I think we ought to start our town control work, in cooperation with the State, immediately."

"And his statement practically turned the tide."

Mr. Jones: "There must naturally be a good many pine owners who are unable, for one reason or another, to make these trips. I suppose you have evolved other means for bringing to their attention the situation existing in these severe infection areas?"

S. L. "Yes, we are using a certain type of poster, upon which has been depicted by diagrams the amount of infection in that particular lot. Just as often as a new infection of one-half acre or more, where the percentage runs high, is found, data is secured on it, and a poster is worked up. As the Agents have found these posters quite helpful, I am going to request Mr. Robb to give us his views on:

THE VALUE OF DAMAGE STUDIES IN BLISTER RUST CONTROL

Mr. Robb: "Last Fall two severe infection areas, of about one acre each, were located in the towns of Hanover and Lyme. Two requisites govern the selection of all pine areas destined for demonstrations of damage by Blister Rust. The requirements are (1) Percent of infection and amount of damage, and (2) Availability. Where there are several known areas of equal severity, the most accessible one is chosen. Both of the areas selected in the towns just mentioned chanced to be located along well-traveled highways, and will also have added value as "Road-side" demonstrations."

"The initial step in this work is to secure the permission of the owner, for it is a fixed policy in New Hampshire to refrain from advertising the condition of any pine lot, or carrying on investigations likely to give it harmful prominence, without the approval of the owner. It so happened the owner of the Hanover area was a "booster", and he agreed to do anything to assist us in securing the best results."

"The area was surveyed by means of a plane-table, and the whole plot laid off into sixteen equal sub-divisions. Unless there is an abundant distribution of ribes over the entire area, such bushes as are found are also plotted on the map. Each pine was then examined and the data secured recorded on a form specially prepared for this work, Here is a sample of the line-up of the form used. (Agent passes copy of form to Mr. Jones.)

PINE INFECTION FIELD SHEET
White Pine Blister Rust Control

Town.....State.....Date.....Data & Notes by.....

Plot No.....Strip No.....Bearing.....Distance.....

Pine No.	Hgt.	Age	Tolerance					Condition			Age Oldest													
			F	D	I	S	H	Rec	Dy	Ded	Canker													

"The age of the oldest infection was secured for each pine, and a check made in the column of the proper year. By this means, practical information was secured which would permit tracing the increase of infection year by year." It is such information that we here in New Hampshire, believe proves the most startling and impressive to the pine owner. Instead of working up a poster upon which the percentage of infection is given solely by figures, three large circles are drawn, and these are employed to graphically indicate the progress which the Rust is making. Here is an illustration of how this data is utilized. (Agent passes a poster to Mr. Jones).

BACK IN 1916

Skeptics Shrugged Their Shoulders and Said

"Blister Rust Is Nothing But a Fake

It Will Not Harm The Pines"

TIME PROVED THEM WRONG

for

NOW IN 1923

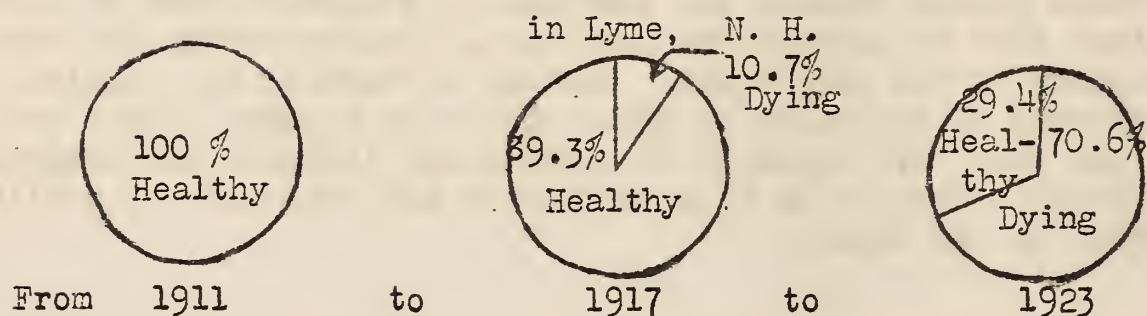
DEAD AND DYING PINES

are found

IN 204 TOWNS IN NEW HAMPSHIRE

THE WHOLE STORY

of one pine lot



THIS LOSS COULD HAVE BEEN PREVENTED

By Destroying Currant and Gooseberry Bushes in 1911

PINE OWNERS OF GRAFTON COUNTY

DO YOU KNOW?

1. Whether Blister Rust Is In Your Pines?
2. That The Rust Can Be Controlled?
3. That The Cost Is Low?
4. That A Free Examination Of Your Pines
Will Be Given Upon Request?

"We also make it a point to indicate the percent of pines which have been killed by the Rust, but in this particular area none of the trees were entirely dead, so this phase of the disease could not be shown."

"Blue-prints are made of these posters and circulated not only throughout the town in which the infection exists, but also in neighboring communities. Stores, post offices and railroad stations are good places to tack these posters up."

"Mr. Jones: "I am a firm believer in publicity of this sort, and particularly in presenting data on local conditions in the neighborhood where such situations exist. While I realize it is often difficult to determine just how effective publicity is, do you happen to know whether these posters aroused any interest in the towns where they were displayed?"

"Mr. Robb: "In the town of Lyme, the attitude of the pine owners had been quite indifferent inasmuch as they had been advised by their Selectmen and others, who were supposed to know, "that no danger from Blister Rust existed in the town as it had not spread to any extent." After the charts had been posted for a short time, we had numerous requests for examinations from pine owners who had been lead to believe that the work already done in that town was merely propaganda put forth to scare them into paying for unnecessary work."

"The posters, - backed by the demonstration plot, which was located about a mile from the village,-converted many skeptics, and was, without doubt, a big factor in securing cooperation on control work."

"I believe that the compilation of the data composing these posters is a good thing for the Agent, and open his eyes, also, to conditions in certain sections of his district. They furnish him definite examples of the effect of Blister Rust which he can present to local pine owners, and thus acquaint property owners with conditions in their town. These local demonstration plots make a greater impression than if they were situated fifty or one hundred miles distant. In preparing the posters, I believe that the following points should be observed:

1. Have some portion of the poster conspicuous enough to attract the eye; either by color, shape or large print.

2. Have the printing sufficiently large and clear so that it may be easily read at a distance, i.e. fifteen or twenty feet.

3. A map, showing the location of the demonstration plot, either attached to the poster, or preferably, incorporated in it, ought to add to its value.

4. Have self-addressed post-cards at hand, or some means by which anyone interested may secure an examination of their pine lot or other information.

5. The posters should be placed where people congregate and have time to read them; i.e., stores, post offices, creameries, watering troughs, etc.

"Other points will occur to the Agent as he assembles his data, and lay out the posters, but they ought to be governed by local conditions."

Mr. Jones: "These field demonstrations of how serious Blister Rust can be certainly ought to produce a profound effect upon owners of pine growth. Have you ever staged exhibits at County and town Fairs? I should think that you might reach a large number of people in this way."

S. L.: "Yes, we have, each year, Blister Rust exhibits at all of the principal County Fairs, and as many of the local ones as our Agents can arrange for. Next to field demonstrations, I feel that the Fair Exhibits offer the best medium of securing publicity for our work. However, in this State, a large majority of the small, local fairs take place during the eradication season, and while the Blister Rust Agent may squeeze in time enough to work up his exhibit material, it is often difficult and well-nigh impossible for him to personally assume charge of his display. In some instances, where his eradication work is slackening up, he is able to assign one of his best foremen or scouts to "fair work", and thus have someone present who can explain the rust to interested parties. There is another kind of publicity which is similar to that secured at Fairs, and which we endeavor to carry on in each community where eradication work is under way. I refer to the use of store windows as places for staging exhibits. We have found them excellent in arousing local interest. I have requested Mr. Keene, of Sullivan County, to tell us why he believes Window Exhibits are more effective than many of the other kinds of publicity.

WINDOW DISPLAYS VERSUS NEWS ITEMS.

Mr. Keane: "Not long ago the local agricultural agent and myself were reviewing the various methods of interesting the public, such as newspaper articles, circular letters, field meetings, and window displays. It appeared that he was not over-impressed with the value of the latter, and was inclined to feel that written publicity would prove more effective. As I did not agree with him, I proceeded to present my views in support of window exhibits. The following represents the jist of the arguments which I advanced."

"Take the question of newspapers! Such channels are excellent up to a certain point, but news articles must be well written if they are to make anythink more than a passing impression upon the reader. Too often we expect immediate signs of interest following the publication of an article on some phase of Blister Rust, but we forget that the public interest is primarily in articles of personal nature, and that they will read only that which appeals to them. I admit that a few illustrations will assist greatly in winning the desired attention to the article, but I believe the news articles lack the necessary substance with which to convince the reader. It is true that the newspapers reach a large number of people, and certainly, from that standpoint along, we ought to secure the greatest results by use of the press. Nevertheless, just insert in your article an offer of assistance to those who will write the author, and then sit tight and note HOW FEW RESPOND."

"Circular letters are likewise find mediums thru which to reach people, principally because of their personal appeal. Yet, this method is rather expensive considering the number of replies received."

"Personal visits are, of course, a splendid form for securing the desired interest, and I would not, for one moment, wish to depreciate their value. On the other hand, there is a limit to the number that can be made, and it must be admitted that the expense attending them is considerable."

The one method that is productive of the best results is a field demonstration. However, the time necessary in arranging for these demonstrations is often so great that holding them frequently is hardly possible. I believe that a field meeting will give the best results if it is preceded by a window display in the nearest community."

"I was very much impressed by a statement which a successful business man made to me only recently. He said, "Take those two windows away from the front of my store, and my business will shrink fifty percent, regardless of any increase in newspaper advertising that I might do." This certainly ought to be a proof of the value of window displays to Blister Rust Control."

Mr. Jones: "Assuming that window displays are all that you claim for them, what, in your opinion, is a good standard arrangement of such exhibits?"

Mr. Keane: "I would arrange a Blister Rust display as follows:

1. A few good specimens of the disease on both pine and Ribes; these to be staged so as to show off to the best advantage.
2. If good-sized photographs were available, I would supplement the live specimens by a series of pictures depicting damage to pines.
3. Use several posters stressing the necessity for control work, and phrased in a manner to attract attention.
4. Employ charts, graphic or otherwise, to indicate the difference in condition of plots where Ribes had been removed and those where no control work had been performed.
5. Give the cost of any local control work which has been completed; the acreage covered; Ribes destroyed and record of infections located.
6. If literature concerning the life history and means of control is available for distribution, a card should be conspicuously placed in the window calling attention to this fact and stating that a "Free Circular" may be secured upon request to the store-keeper.
7. Compare the cost of Blister Rust Control as against other forms of insurance.
8. Also have a card in the window indicating the agencies in charge of control work, and address of their nearest agent.

S. L. "Some of the Agents have complained that it is difficult to secure free space for a window exhibit. In requesting the use of a window for such a purpose I find that it often helps to call the store-keeper's attention to our "Free Circular", and advise him that it will be the means of bringing in prospective customers."

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Mr. Jones: "I suppose that all of these methods are employed to arouse

the interest of pine owners. If a town fails to provide funds is there no further effort made to secure the removal of the wild Ribes?"

S. L. "Though we believe in Town Cooperation as a primary means, still, where we fail to secure town funds an effort is then made to interest the individual owner. In fact, it often happens that while our educational work may be directed toward communities, many individuals, as a result, come forward and announce their desire to apply control measures. We believe, too, that eradication activities by a single owner constitutes an excellent form of publicity, and in several instances such a project has ultimately brought about town cooperation."

Mr. Jones: "What methods are employed to induce a pine owner to remove the wild bushes upon his property?"

S. L. "Probably no two men would approach a pine owner in the same manner, but there are several cardinal principles which apply in arousing interest in any commodity or service. The Blister Rust Control Agent from Rockingham County, Mr. K. E. Barraclough, was pretty successful last year, and he ought to be able to tell us:

HOW TO SECURE THE COOPERATION OF INDIVIDUALS

Mr. Barraclough: "I do not believe that an Agent can always follow a set of fixed rules when he attempts to "sell" Blister Rust to pine owners. As the State Leader has just brought out, there are a few general principles that should be borne in mind, but whether the application of all are essential in every case depends of course on the makeup of the individual with whom you are dealing. Before considering what these "general principles" are, I want to mention some of the subjects upon which the Agent ought to be fairly well versed in order that he may be able to "approach" his prospect successfully. Do we, as Blister Rust Agents, always know:

1. All of the general facts, as well as the fine points concerning the life history of the Rust?
2. Are we familiar with Blister Rust conditions which exist upon the "prospect's" property?
3. Have we a general knowledge of forest fungi and insect pests?
4. Do we know something of the principles of forestry?
5. Are we familiar with agricultural activities?
6. Have we any knowledge of logging and lumbering?

"I feel that not only is it a good thing to have a knowledge of these things, but very essential. Of course we are expected to be conversant in the first four subjects, but I wonder how many of us have considered the aid that familiarity with the last two subjects would give us!"

"Let us suppose, for example, that our "prospect" is a farmer. Would we not secure added prestige and respect if we were able to converse intelligently on matters pertaining to the farm? The same might be said in cases where we were

dealing with a lumberman. The thought is likely to arise in someone's mind, "Why should we be expected to know about such matters, our job is Blister Rust. We do not call upon a pine owner for the purpose of discussing agriculture or lumbering; our mission is to secure his interest in Blister Rust Control."

"I do not pretend to be familiar with the characteristics of the rural population in all of the States cooperating in Blister Rust. I do know, however, think it would be folly to rush up to a Rockingham County farmer, and without any other preamble hurriedly say, "My name is Mr. - - -, I represent the State Forestry Department and the Bureau of Plant Industry, of Washington, D. C., and I wish to inform you that your pines are in immediate danger from Blister Rust and that it will be necessary for you to eradicate your Ribes at once."

"An Agent should be guided in his overtures by the personality of his prospect and the reception which the pine owner first accords. "Fore-warned is fore-armed"; therefore, if possible, it is well to secure before hand information relative to the characteristics of the person you seek to interest in Blister Rust. There are times when an agent will be able to disclose the purpose of his visit almost at once; often, however, the weather, politics, crops, or even the latest "Ford Model" will have to be thoroughly thrashed out before the real objective can be mentioned. Sometimes it seems necessary to allow the pine owner to "warm up" to me before getting down to the hard facts concerning the Rust. Again, it may be to my advantage to let him become a bit curious as to my business before I broach the subject. The big thing, as I see it, is to "create an interest", after that you may bring forth your real mission."

"When you get down to the subject of Blister Rust, make an effort to explain the life history of the rust in a simple and concise manner. Describe carefully the methods employed in eradication, and if you have local cost figures quote them. Whenever it is possible, I always make it a point to have some knowledge regarding infection and Ribes distribution on the land of my prospect. Armed with such information I can better answer his questions and quote him a more exact figure as to costs. In addition, we should strive to show courtesy and tact. Be frank and honest in any statements which you make and endeavor to indicate that you know your business and are capable of handling it."

"All of what I have tried to bring out deals largely with the psychological side of interesting owners in blister rust. I am a firm believer in actual demonstrations of the effect of the rust as a means of securing individual cooperation. One should certainly have some good specimens along, and what is better, should endeavor to take the pine owner out to a good sized infection area. If the rust has been found on the owner's land, the location of all known infections should be shown him.

"Finally, there is one very important point to remember. After an individual is won over to Blister Rust, be he a cooperator or only a dispenser of moral support, he must not be neglected. The local agent ought to keep this new recruit fully informed as to developments in the work."

Mr. Jones: "In the remarks which Mr. Barraclough has just made he speaks of "dispensers of moral support"; I presume he refers to persons who, perhaps, are non-pine owners, but who cooperate by either lending their influence to the cause, or permit the removal of their cultivated currant and gooseberry bushes. I have heard relatively little in reference to the actual control work, and I have been wondering about the problem - for such it must be at times - of securing

without unpleasant consequences, the removal of cultivated bushes. To me it appears as one of the most difficult phases of your Blister Rust work."

S. L.: "You are right, Mr. Jones, the removal of cultivated Ribes, if not the most difficult part of our work, is certainly the most unpleasant. Mr. Boomer, the Agent in Carroll County, has created another division of our work, for in addition to the Educational activities and the Ribes eradication work, he places the business of destroying cultivated Ribes in the "Diplomatic Service". The more I consider his classification, the more I am convinced that he has hit on a very apt description of an important part of our work. Consequently, I am going to ask him to give us his ideas on the functioning of:

THE BLISTER RUST DIPLOMATIC SERVICE

Mr. Boomer: "No, you can't have my currant bushes. I paid for them and I am going to keep them", said the owner, after hearing the story of the Blister Rust Control Agent.

"But, Madam, white pine cannot live where there are currant or gooseberry bushes," reasoned the Agent.

"I don't care, I havn't any pine", replied the lady.

"The Agent, thinking he would approach from a new angle, asked, "Is Mr. Blank at home?"

"No, he is working for Smith & Company as a sawyer in one of their portable mills. He has been employed by them for ten years", proudly adds the owner of the bushes.

The Agent: "Then you get your living indirectly from white pine. Currants and gooseberries help take the bread from your table."

"I don't know but what you are right; I had not thought of it in that way." responded the lady. She paused to compare the value of the crop obtained from a score of currant bushes, not particularly well care for, with the value of the young pines across the fence.

"My currants are not worth what they may cost in terms of damage to the pines, so I guess you may as well destroy them."

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"The above discourse is not given as an example which may always be employed in convincing owners of cultivated Ribes that they should give up their bushes. It is merely an example of the conversation which might take place between an owner and a Blister Rust Agent. However, I believe that whether the Agent be interviewing the "head-of-the-house", or his "better-half", a careful, courteous attitude, on his part, supplemented by inquiries, may often disclose angles which will ultimately change the views of the owner and bring about the desired result."

"In New Hampshire, the removal of cultivated Ribes is handled in the following manner. During period when the weather does not permit eradication in the woods or along roadways, the crew foreman, often assisted by the Scout, makes a census of cultivated bushes within the designated control area. At such a time, the owners

are interviewed and the reasons for the destruction of both wild and cultivated bushes carefully explained. While the State Blister Rust Law confers upon the State Forester, or his authorized Agent, the power to enter upon public and private land and effect the removal of all species of Ribes, still, nevertheless, the policy in vogue refrains from invoking the aid of this statute, except in extreme cases. A small form has been devised, which we request the owner to sign, giving us written permission to remove these bushes. Here is a copy, Mr. Jones, of what we term the "Ribes Release Slip".

State of New Hampshire
FORESTRY DEPARTMENT

Town _____, Date _____ 192__

On account of the danger to white pines from the disease known as White Pine Blister Rust, and the fact that this disease is spread from infected to healthy pine trees only thro the medium of currant and gooseberry bushes, I hereby give to the State of New Hampshire, through the authorized agents of the Forestry Commission, all currant and gooseberry bushes growing upon my land, to be destroyed in order to prevent the spread of the White Pine Blister Rust.

Signed _____
Landowner

Authorized Agent.

"It should be mentioned that a signature to this blank is not requested until consent is received to remove the bushes. Sometimes the question is put to our men, "Why do you ask me to sign this paper when the law gives you authority to destroy my bushes?" We reply to the effect that the Forestry Department desires a record of all "public-spirited persons" who have cooperated in control work."

"With the average individual relatively little trouble is experienced. In certain communities, however, we find people who have come from some foreign country where currants are more highly prized. Some of them may have brought a few bushes from their old home and have set them out in their new environment. Thus the original value of these plants is considerably enhanced and it is by no means a small task to secure their removal. It is at such times that more than ordinary arguments are necessary and occasionally the aid of the law has to be invoked."

The chestnut blight gives us a good illustration of what a fungus may accomplish. The ravages of this disease offer a striking argument, particularly in the localities where that tree has once flourished. I find that the numerous articles which have been written in reference to the Chestnut Blight have influenced a good many persons to believe in the seriousness of Blister Rust."

"Other fungus diseases, such as the wheat rust, the cedar-apple rust, etc., may be used to good advantage in proving that Blister Rust is not an unusual type of fungus. Apparently, it is almost incredible to some persons that there can exist a plant pest which must use the currant or gooseberry in order to spread to the pines."

"Diplomacy implies tact. Tact should be employed in all cases whether or not the owners are acquainted with the disease. Their different points of view must be considered and their arguments met."

"Much lasting harm has been done through lack of tact in removing cultivated ribes. The most hard-boiled individual may be reasoned with, his bushes removed, and himself left in good humor, by proper procedure. There have always been, and there always will be skeptics and chronic objectors to be dealt with. Their influence is usually limited, for they are known in their communities and their opinions discounted."

"Tact leads to satisfaction, and satisfaction to cooperation, our goal, because only by the closest cooperation can we hope to complete the task assigned to us."

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Mr. Jones: "Does the New Hampshire law provide for compensating the owners of such cultivated bushes as you see fit to destroy?"

S. L. "Our law makes no specific statement as to compensation for infected ribes, except to declare them to be a public pest, and as such, the State Forester or his agent is authorized to destroy them. We have but little trouble in the removal of cultivated ribes where we are able to show the owner that the bushes are infected."

"Where we find ribes to be free from the rust, but two courses are open; (1) Securing their removal without compensation, and (2) where this is impossible, making the lowest settlement we can with their owner. In reference to non-infected cultivated ribes, the law states that:

"If within any designated area, currants and gooseberries which are not infected with *Cronartium ribicola*, are designated by the State Forester or his agents, and destroyed by his or their specific order, the owner may be compensated therefor; the damages to be assessed by the State Forester or his agents at not to exceed the actual value of the material destroyed."

"Owing to the small state appropriation for Blister Rust control, we have a distinct aversion to paying compensation, and in all cases try to avoid doing so. We realize that every dollar so expended lessens by five or ten acres the pine areas which we might protect in a town. The Ribes Release Slips, which Mr. Boomer has just mentioned, were devised as an aid in eliminating compensation. During the last two years, in lieu of cash, we have been offering owners of non-infected ribes other varieties of small fruit, such as raspberries, blackberries and the like, on the basis of bush for bush. In most instances this scheme has worked out very well; for the owners appear to be satisfied, and as the Forestry Department is able to purchase such nursery stock at wholesale prices, the amount we have had to spend for compensation has been very small."

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Mr. Jones: "Since listening to the remarks of the various agents dealing with their many activities, I am commencing to feel more optimistic regarding the outcome of Blister Rust Control in my county. There is, however, one more question which I would like to ask. As I understand your organization, the agents have complete charge of all Blister Rust Control work in their respective counties. If such is the case, it would appear to me that considerable time must be required in keeping in touch with and directing the activities of these men. How, may I inquire, is that phase of the matter handled?"

S. L.: "While it is true that the details of the work in each county are taken care of by the agents, nevertheless, in view of the relatively short time which has elapsed since the inception of the 3 year control program, it is only natural that many problems are continually coming up which the agents find difficult of solution. I believe that one of the functions of my office is to act as a sort of a "Clearing House", where solutions of problems which have vexed one agent, may, when the occasion arises, be passed on to the advantage of another. Our facilities for securing information relating to new ideas in the practice of forestry and blister rust methods are such as to give us a broader outlook than it is possible for the Blister Rust Control Agent in his limited sphere. We, therefore, should be able to give much assistance and offer suggestions by which the agent can be guided in the better performance of his duties."

"We have been fortunate in having in our organization one whose experience in blister rust dates from the first days of control work, and who has been successful in every phase of the work. I refer to Mr. J. M. Corliss, the Assistant State Leader, and I am going to ask him to reply to your question, Mr. Jones, by telling us something of his work in:

THE SUPERVISION OF THE BLISTER RUST CONTROL AGENTS

Mr. Corliss: "My work might be said to fall into two main divisions; namely, Checking up the Agent's Activities, and Inspection of and Advice in Ribes eradication work. In order that you may have a more comprehensive idea of what the supervision of the agents necessitates, I am going to discuss, as briefly as is possible, these two headings."

Checking the Agents' Activities

"In planning an inspection of county work I generally arrange to first start in at the Agent's office and go over his itineraries of the past weeks. I also check over the list of inspection requests which he has on file, in order to determine the number he has made since my last visit. The Agent's plan of work for the following week or two is studied and criticized. Should the Agent be in the field at the time of my visit, his plan of work informs me where he can be located. I also endeavor to determine how well he keeps his office records up to date. Upon the completion of the office inspection I then make it a point of seeking the agent in the field so as to discuss more thoroughly his activities."

"My investigations as to the success of the educational work are not confined wholly to quizzing the agents, or inspecting their plan of work. I believe

that investigating the status of local sentiment after some educational work has been done, furnishes an excellent criterion of just how successful an agent has been."

"For instance: On one occasion, that I recall, I was just entering the main street of a town where I expected to pick up the Blister Rust Control Agent. In driving along I chanced to see the Chairman of the Board of Selectmen coming out of a store. I pulled up to the curbing and started conversation with reference to the blister rust work that was being done in his town. I inquired of the Selectman whether he had inspected the eradication work. He advised me that he had and stated that good work was being done. I inquired also as to the local sentiment, since the last field meeting. The Chairman said he felt the number of "objectors" were lessening, but added that they were in the minority, and if we continued to "keep with us" those who had stood behind blister rust in the past, he felt our program for protecting the pines would be brought to a successful completion."

"Right here I want to digress a bit in order to emphasize a thought which this Selectman advanced, and one, the importance of which, I sometimes feel we lose sight of. I refer to retaining the interest of cooperators and supporters of blister rust work. Just because control measures have been completed upon a certain owners property, or a crisis averted through the assistance of some interested and influential citizen, is no excuse for feeling that we should drop them from then on. It stands to reason that if any individual is sufficiently convinced of the necessity for Blister Rust Control as to prompt him to put up funds, or to exert his influence on behalf of the work, he will continue to be interested in the progress that is being made. It should be just as much a part of our educational work to maintain the good-will and interest of past supporters, as it was to win them over in the first place."

"In order to determine whether a Blister Rust Control Agent is conducting his work along lines which will insure success, I often find it necessary to supplement my own knowledge of local sentiment and conditions by securing from him his impressions as to the present attitude of the local pine owners. I also learn what kinds of publicity he has been using, and their apparent effect. As a result, I may decide that in one community more field demonstrations are necessary; while in another community additional pine scouting is advisable in order that the seriousness of the local situation may be more forcibly brought home. Again, we may discover that most of the objection comes from one individual whose influence locally is very great. Altho the general forms of publicity will apply to practically all the towns, nevertheless, each community, as a rule, presents a separate problem."

"There are two other phases of publicity which I sometimes feel we are apt to regard as relatively unimportant, but the neglect of either may bring about serious consequences. One is the education of the blister rust crew members, other than foremen or scouts, and the other, investigating and clearing up alleged misdemeanors of our field organization."

"It is a very easy thing to rule that none of the crew members, save the foreman or scout, shall impart information relative to the nature of blister rust or the means used in its control. On the other hand, it would be an extremely difficult thing, even under penalty of dismissal, to enforce such a regulation. So is it not, therefore, far better to explain the details of the work; encourage

suggestions; advise them as to the sentiment for and against control work, and thus make our eradication force feel that they are really a part of the organization."

"I am also strongly of the opinion that whenever we learn of reports being circulated around town with reference to misconduct on the part of the crews, - whether it is in reference to their activities during or after working hours - every effort should be made to ascertain whether there exists any foundation for such statements. If our investigations disclose that the crew under suspicion is blameless, then our findings ought to be made to the town authorities and others, so that the public will know beyond all question of doubt the truth of the affair. Should it be determined that our men are not guilty, then, the fact that we have stood behind them ought to gain us the confidence and respect of the public. On the other hand, if the crew members are in the wrong, and we discharge them, we will have gained the confidence of the public. Failure to properly look into such reports is likely to have a serious reaction locally, and may even extend beyond the limits of that particular community."

Checking the Agent's Supervision of Ribes Eradication Work:

"In the earlier days of the control program, some of the Blister Rust Control agents failed to appreciate that their publicity work was only a sort of a "pre-amble" to the real objective; the destruction of wild and cultivated currants and gooseberries. They apparently saw the necessity of educational work, but did not appreciate that careful selection of control areas, hiring of capable men, close supervision and checking of crew work, and transfer of field units with the least possible expense, were of just as great importance."

"When I am in the field I always check up these various phases of Ribes eradication work. I believe, too, that in crew inspection we should not hesitate to "get into the line" and pull Ribes with the crew. It won't do us much harm and it should have a wholesome reaction on the crew members."

"While I realize that during the eradication season many of the agents are so busy with the numerous duties connected with the field work that they find it difficult to do any considerable amount of checking, still, I feel that more checking of crew work should be done than has been the practice in the past. The best-educational work in the world may be under-mined in twenty-four hours as a result of some local person discovering inferior Ribes eradication. The knowledge - on the part of an agent - that excellent control work was performed in his town constitutes one of the strongest arguments he can advance.

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S. L.: "While we are on the subject of Ribes eradication work, I think it timely that the matter of "Checking" be considered. As Mr. E. J. White has acted in the capacity of State Inspector of Eradication, I believe he will have something both interesting as well as instructive to tell us.

Mr. White: "If one is to secure a thoroughly comprehensive idea of the details of checking, he should make a study of the individual reports covering inspection in each town. As I realize such a thing is impossible today, I will endeavor to summarize the work which I did last season. "The inspection work was divided into three general classes; (1) Areas previously worked by crew and scout, (2) those made behind crews only, and (3) Advance Check Plots.

"Checks in areas previously worked by the crews were made in 17 towns, there being 62 such inspections, totalling slightly over 65 acres. In these same towns 13 miles of brook banks and 7-1/8 miles of stone walls were checked. I think the results of these checks may prove interesting. The total number of Ribes pulled by the crew are as follows:

17,827 in swamps, pastures and uplands,
6,976 along brooks,
95 along stone walls and roadsides.

"In swamps, pastures and uplands I found but 217 missed bushes; along brooks only 81, and stone walls 1 bush."

"Checking behind the crew was carried on in 6 towns; the types in three localities being swamp, and three pine growth. The crews pulled a total of 6,614, all of which were skunk currants; I found but 89 bushes."

"I laid out 2 advance check plots in a mixed pine and hardwood type. Each plot covered one-fourth acre, and the total feet of leaf-bearing stem was 25-1/2. In a re-examination of these plots a few weeks later I was unable to find any missed bushes."

"One of the most encouraging and note-worthy points in connection with my inspection was the size of the bushes which I found in areas previously worked by the crews. In practically every case these plants were very small, in fact most of them could be placed in the "Seedling" class.

Mr. Jones." May I inquire, Mr. White, how you go about locating a strange crew when you wish to conduct a check behind them? I should think that often you would consume a great deal of time trying to find them."

Mr. White: "Before starting my inspection work in any county, I always visit the Blister Rust Control Agent and secure from him a complete set of maps covering towns in which eradication work is being conducted. These maps indicate the areas chosen for this season. The Agent also advises me the field headquarters of each crew. On arrival at field quarters I examine the notes and map left by the foreman in his room. Each day, before leaving for the field, he indicates the blocks in which his crew will be working. This is a great help to the inspector as it enables him to "get busy" checking without loss of time."

"In the town of Hopkinton I found they were using, in addition to the map left in the foreman's room, a metal sign, similar in appearance to that employed by State Highway Patrolmen. On it was the legend, "Come In, Blister Rust Crew Working Here To-day". The sign was placed on the side of the road nearest the block in which the crew was working. I believe that these signs are an excellent thing, and if they were used more generally around the State would eliminate considerable running about by Agents, Inspectors and others who desire to locate the crew. One suggestion has occurred to me which might assist in making this sign even more valuable. A hook might be attached to one corner of the sign, and a note fixed to it, telling the shortest way to where the crew was working."

"I feel too, that aside from the assistance which these signs give to those employed in Blister Rust Control, that they serve as excellent mediums of publicity. It might often happen that when a local resident was driving or walking along the road he would be attracted by such a sign, and, having time to spare, would visit the eradication crew."

"A further help to both Blister Rust Control Agent and Inspector, in connection with the map left in the foreman's room, would be the shading in of completed areas in such a manner as to indicate which plots or sub-divisions had been thrown out by the scout, and which had been worked by the crew. Such a system would enable anyone to check up either crew work or advance scouting without having to apply to foreman or scout. I found this scheme in use in some towns, but believe it should be put in general practice throughout the state."

"I believe that should an inspector discover anything radically wrong during his examination of eradication work, and something which should be corrected immediately, he ought to be authorized beforehand to step in and make whatever change he feels is for the best interests of the work. He should then get in touch with the Agent and after advising him as to the conditions, inform the Agent what he, the Inspector, has done to correct them. I also feel that it is very desirable for the inspector to confer with the Agent, at least once a week, regarding conditions as he has found them. In case his stay in a county is shorter, and nothing startling develops, the two men should get together on the completion of the inspection."

Mr. Jones: "Is your work confined wholly to inspection, Mr. White, or are you called upon by persons you run across to advise them regarding blister rust?"

Mr. White: "While my work, during the Ribes eradication season, is confined principally to inspection, I am instructed by the State Leader to assist the Agents whenever possible in their work. Often, in going from one area to another I meet townspeople who inquire about some phase of the work. In several cases I have inspected pine lots upon the request of their owners, feeling that the good of the cause demanded immediate action. I also make it a point to inquire, as I go around locally, as to the impression which the crews are making upon the townspeople."

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State Leader: "We have been listening to the experiences of the various blister rust control agents and have, I believe, secured some valuable ideas which can be taken home and perhaps used at some not far distant date. I sometimes feel that too often in attempting the solution of a problem we endeavor to find the answer within our ranks, instead of first seeking the advice or opinion of those on the "side-lines". Because of this belief, I am going to request Mr. Foster, the State Forester, to give us his ideas and views on the:

OPPORTUNITIES AND RESPONSIBILITIES OF A BLISTER RUST CONTROL AGENT

Mr. Foster: It seems to me one of the biggest openings in forestry today lies in the relatively new field of county blister rust control work. A county blister rust control agent's job would be a might fine one for any graduate forester to step into. A graduate in forestry has the mental background and the forestry training which would serve him well as a county blister rust control agent, but his natural ability to handle crews of men, to meet land owners in a convincing way and to sell blister rust and forestry, as well as to handle his duties in an orderly and businesslike manner, has not been tried out. He might have this natural ability to a marked degree, and he might be a failure. This depends, not on his forestry training, but on his makeup. The reason why most of our agents at present are not technical foresters is because the forest school graduates are not sufficiently trained in blister rust control work, or have not proved their adaptability to the work. If an agent has the natural ability to

do the things well, which he must do to be a successful agent, then, a technical training in forestry and a mental background, which a good college education gives, would make him a veritable wonderman in this position."

"It is not my thought to disparage technical forestry in connection with our agent's work. On the contrary, I feel there is the closest relationship. It does seem, however, as though the average well-trained technical forestry graduate lacks certain qualities of leadership and salesmanship necessary in order to put the blister rust control program through successfully. Perhaps technical foresters are too visionary, although it must be admitted that vision is necessary for all foresters to have. If a man is to engage in a line of forestry work which requires close contact and cooperation with farmers, lumber operators and other land owners, as must be the case more and more in the future, the forester must be a salesman and have the elements of leadership. The successful agent has qualified because, first, he has been able to convince the people in his county that blister rust control is necessary; second, he has secured from his people the money necessary to do the work, and third, he has been doing the work and spending their money to their satisfaction."

"There is another responsibility than that of getting a large territory well covered at a minimum cost each year, fundamental as this is. It is the responsibility of creating a real and abiding interest in the practice of forestry, particularly as it relates to white pine, among the land owners of his county. It is not enough to gain support for blister rust control from a conservative owner of pine who may be interested only to harvest his nearly mature timber. The real and final achievement of the agent is to create interest in the potential forest which will not be marketable for 40 years or more, to bring about methods of cutting which will provide for pine reproduction, to successfully bring about the general practice of cleaning or weeding to save pine from inferior hardwood growth, to stimulate reforestation and bring about the practice of forestry generally among his woodland owners. The successful agent is doing all these things today although never losing sight of the fact that blister rust control is a primary purpose and the reason for his being on the job."

"Experience is showing more and more each day that blister rust control and forest management, as relates particularly to white pine, go hand in hand. It is futile to advance one without the other. Until the agent became a forestry representative in each county there was no means of contact with the individual and no way of knowing whether the practice of forestry was reality or still a vision among those not in the field. Blister rust control agents of New Hampshire are now able to name hundreds of land owners who are practicing forestry who were not known before. In no small degree is the blister rust work bringing about better management of white pine forests. In five years more I believe results achieved will be startling. The close connection of the agent with the farm bureau organization and the extension service have even greater possibilities, such as cooperative marketing of woodlot products. With a forestry committee in each county farm bureau alive and functioning, a forestry leader in each town and a successful blister rust control agent working harmoniously with the whole organization in the county we have reason to believe that the practice of forestry is well on the way. Many of the counties in New Hampshire are now organized in forestry under such a program."

"To the blister rust control agents I would say that success depends upon them. If we fail to give them all the instruction and support possible they cannot of course do their best work. Nevertheless, they have a virgin field and a "little principality" in which to work out certain results. If ~~they~~ have the right makeup and learn how to solve all the problems in forestry of importance to their county and get results, they will have made a place for themselves. If they lack the vision or fail to master the problems in forestry which confront the land owners, they will ultimately fail in their work even though they are reasonably successful in their blister rust control work. Undoubtedly, the graduate forester can make the best type of blister rust control agent if he has the makeup of leadership and salesmanship. The agent without technical training can, however, become self trained. If he fails to train himself then he will be replaced by one who can or who has been technically trained and elects a line of work which leads to an agent's position. This means field experience as a crew man and foreman. I believe forest school students should strive to get this experience before graduation."

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S. L. "I want to endorse all that Mr. Foster has just said to us. While those of us who are located at the Central Offices are more than willing to assist the Agents in every way, nevertheless, under the present system, the responsibility for both educational and Ribes eradication work in each county must naturally rest on its Agent."

"We have heard expressions pertaining to blister rust control from practically everyone engaged in the work, except, however, from the Extension Service. The State Director of Extension, Mr. J. C. Kendall, is with us today and I am certain he will have something of value and interest to give us."

EXTENSION WORK AND THE BLISTER RUST CONTROL AGENT

Mr. Kendall: "With one half of the average New Hampshire farm in woodland, and 17 percent of it in merchantable timber, the proper management of the woodlot is an obvious essential of a wise agricultural policy in this state. Yet most farmers have been content to let this half of the farm shift for itself. How to make them "wood conscious" is the problem of both the agricultural and blister rust agents. As their interest in forestry increases, their interest in the control of blister rust is bound to increase."

"The close cooperation between our two agencies in New Hampshire resulted last year in 117 demonstrations of improved practices in the farm woodlot. Blister rust control, itself, of course represented a good share of these; in addition there was work in planting, weeding, thinning and measuring timber."

"A new development of the past has been the Junior Forestry Club. The first club of this type was formed last fall at Dover, and the idea is spreading. It seems to fit in particularly well with the plan for town forests, appealing to community pride and foresight, group action and fondness for forestry work on the part of both boys and local leaders. In Durham, this past Spring, a group of Boy Scouts enrolled in this project, and planted 3,000 trees in the town woodlot under the leadership of the local pastor. In Carroll County the Blister

Rust Agent and Club Agent got 5,000 pine seedlings planted in one week by boys. Interest in this work was also shown in such towns as Madison, Centre Ossipee, Chocorua, Bartlett, Effingham and Centre Tuftonboro--many of these, well known names to lovers of the White Mountains. This is not such a far call from Blister Rust Control as might seem at first sight, since every boy interested in pines is likely to do a better job of interesting his father than an adult could do in many devious ways."

"Not only has the Blister Rust Control force in New Hampshire been most helpful and generous in assisting with the various farm woodlot problems, but the extension agents have also endeavored to help in every way possible in waking up the state to the great menace to its white pine industry. Most of the community planning meetings last fall were reminded of the necessity of getting their "second wind", and going after ribes with renewed vigor, and Farm Bureau members were urged to take leadership in getting appropriations at the Spring town meetings for control work."

"New Hampshire aspires to a demonstration of what can be accomplished for farm forestry when county agent and blister rust control agent work shoulder to shoulder for the common good."

S. L." Well, Mr. Jones, I believe our program is concluded. I trust that we have been able to convince you "how easy" it is to put Blister Rust Control accross. Have you any other questions in mind before we go?"

Mr. Jones:" Yes, just one. How soon will you be able to send a Blister Rust Control Agent to my county? So far as I am concerned he can't come too soon. I am eager to see what "defenses" some of our "hard-heads" will put up to the Agent. Don't believe they've got a leg to stand on when it comes to combatting the arguments you Blister Rust folks can put up."

S. L.:" We'll certainly try to do our best, Mr. Jones. I believe we've got just the right man for your county, and we'll have him report one week from to day."

Mr. Jones:" That will be fine; I'll be on the lookout for him. Our slogan from now on will be, "Up! Up! Up! Come the currants and gooseberries."

Curtain.

Around and About The Granite State.

"STILL ON THE JOB"

Mr. J. J. Fitzpatrick, Blister Rust Agent for Belknap County, is on temporary leave of absence due to ill health. At the hospital, where "Fitz" is rapidly recuperating, they permit him short walks daily. Just to liven things up a bit, Fitzpatrick drags in each day a "cartload" of pine infections. According to the latest reports, the Superintendent of the hospital has become so frantic over the condition of the pines that he appealed, not long ago, to Governor Brown for assistance. His Excellency, in turn, has requested the Forestry Department to carry on eradication work this season on the hospital lands. Good work, Fitz, say we!

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ATTENTION OF DR. SPAULDING!

The following letter was recently received by the Forestry Department.

N. H. Forestry Commission,
Concord, N. H.

Dear Sirs:-

Would you please remove the gooseberry and current bushes from the land of Mr _____, a blacksmith, _____ road on Plains one mile from State House.

I live next door and have eight apple trees that have blister rust.

Yours truly,

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By the way, Doctor, in view of the most recent developments of *C. ribicola*, do you believe that apple-raising in New Hampshire is to be recommended?

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Tom Kane writes in from the "frozen north" to advise us that a resident of Lisbon, now traveling in Europe, has written him to "clean up the ribes" on his place at Sugar Hill. "Tombo" figures that this new cooperator must have seen a bit of blister rust while abroad and became nervous over his white pine lot "back home".

Appropos of his educational activities, Tom states that, "during the past few months the Agricultural Agent and myself ran moving pictures in several towns. The films were illustrative of blister rust, uses of white pine, and different phases of forestry. I might add that these meetings were the best attended since I came into the county. It might be an advantage to us if we exhibited "movies" more often."

Stephen H. Boomer, from the foothills of the Presidential Range, writes that he found fully developed aeciospores in East Madison, on May 2nd. This is very early for that latitude.

"Steve" says that "planting of white pine is going on very well in Carroll County." He also states that more persons would have set out pines had the nursery stock been available.

ACTIVE COOPERATION IN MAINE

Good Control Work of 1923 Brings Additional Cooperation this Year

Augusta, Maine

Mr. W. O. Frost,
State Leader, Blister Rust Control,
State House.

My dear Mr. Frost:

In replying to yours of recent date relative to the white pine blister rust, will say that we find a feeling of anxiety among the owners of timberland, and the desire for information concerning the dread disease.

In our nursery inspection work, we have used the utmost care whenever there happened to be white pines among the lot, but have not found any diseased trees.

The nurserymen, and those who are planting white pine, are very glad to cooperate with us along this line of work.

I think you will be interested to know that the work of eradicating the currant and gooseberry bushes on the farm of Henry P. Warren, town of Waterford, in Oxford County, in 1922, was done so thoroughly that we found very few ribs coming up from the roots that were broken off and left in the ground when checked over this season.

We rescouted this farm again this year and took out every piece of root that we could find, which were very few. So impressive were the results of last season's work of eradication that Messrs. Irving Green and Jack M'Allister, owners of the adjoining farms on the south and east, cleaned out all the currant and gooseberry bushes from their pine lands.

I can see the good results of your work as I go about the State.

Most sincerely yours,

(Signed) G. A. YEATON,
State Horticulturist.

Grade Pupils Write Compositions after Hearing Talk on Blister Rust.

Clippings have been received from the Newburyport Daily News, (Mass.) of May 9, 1924, concerning a talk before the grade schools of the city by Mr. W. T. Roop on the white pine blister rust.

"The pupils afterwards wrote compositions on the subject. The best one from each school was sent to the superintendent's office and the best one in the city was chosen. It was written by Forest Johnson of the Albert Currier school."

The essay appeared in full in the paper and was very creditable.

Editor: Of course Forest Johnson took first. Who wouldn't with a name like his?

LANTERN SLIDES

Sets of slides have been recently made up in the Washington Office and sent Messrs. C. C. Perry, S. H. Boomer, K. E. Barraclough and L. E. Newman.

The Office still has a large collection of colored slides on blister rust, and a smaller collection of slides on white pine, both of which are available for distribution.

If agents prefer to have slides made up from their own negatives, they should send in those with good sharp outlines.

PHOTOGRAPHS IN BLISTER RUST WORK

Some of the blister rust agents have only recently come into the work and may not know of the large set of photographs relating to the blister rust, and its control, which the Washington Office has on file.

Copies of such photographs as the field men can use in their work, will be made for them on request.

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Agent Conner, of Cumberland County, Maine, makes the following suggestions regarding psychology:

"I have been wondering if it would not be a good idea to devote a page or so to psychology. Seems to me that our work is so closely related to that subject that we cannot afford to neglect it entirely. Every blister rustler knows that one of his most useful resources is "tact". Tact is based on psychology; so is salesmanship and advertising. The agent's knowledge of all these subjects is continually being taxed to the limit so why not devote a little space to this in the News. The exhibit section of the New York issue takes up one of the points I had in mind but why not call a spade a spade and when we have a subject dealing with psychology say so. It seems to me that a section of the News devoted to psychology would not be out of place."

Editor: How do you other agents feel about it?

Newspaper Publicity Paves the Way for Service.

Mr. George E. Stevens, who transferred his operations from Vermont to New York this spring, and who is now working in northern New York with headquarters at Lowville, believes in getting in right with the press. Four lengthy newspaper clippings regarding the blister rust control work appeared in local papers during June. Advance publicity such as this should make personal contacts with pine owners more successful.

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A Suggestion

Circular 250 of the Department of Agriculture on Educational Milk for Health Campaigns is being sent to all of the field men in the eastern blister rust control work.

Editor: This circular is a valuable one to study, for the campaign has resulted in a marked increase in the consumption of milk.

Take a squint at the graphs and charts and photos. They helped put the campaign across.

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COOPERATION IS THE LIFE OF ACCOMPLISHMENT.

- - - - -

DO NOT LEAN ON ANYONE, AND LET NO ONE LEAN ON YOU.

STUDENTS VISIT INFECTED PINES

High School Biology Class Observes White Pine Blister Rust in Townshend, Vt.

with S. V. Holden.

- - - - -

About 30 members of the biology classes of the Brattleboro High School, with several parents and teachers, made a study Thursday afternoon of an area of pine in Townshend which is badly infected with the white pine blister rust. The party was conducted by Sharon V. Holden, agent in charge of the blister rust control work in this section.

The class has been studying the blister rust, but to actually see the large number of diseased and dying trees, and to watch the clouds of "yellow dust" drift away from the blisters whenever a tree was jarred, brought home with compelling force the great seriousness of the situation.

(Abstract from the Brattleboro (Vt.) Daily Reformer, Sat., June 7, 1924.)

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In an article on the recent expedition through the Grand Canyon, published in the National Geographic Magazine for May 1924, the statement is made that the boats for this expedition were made of Michigan white pine, and proved satisfactory.

M. Thompson, Washington

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"A DAY IN THE WOODS SCOUTING PINE BLISTER

County Agent G.H. Kimball Shows the Damage that Is Being Done to the Pine
That Has Made Maine Famous."

- - - - -

"The writer accepted the invitation of G. H. Kimball of Auburn, who is the White Pine Blister Rust agent for Androscoggin and Sagadahoc counties. This is rather a long title for a medium sized man, but he carries it off all right.

If anyone doesn't believe that there is need of taking care of the growing pine in this State he should take a trip with Mr. Kimball. Even the squirrels in the woods know where the damage has been done. They like the taste of the sweet sap that exudes from the wound of the blister.

The trip was made over into the town of Bowdoin near the farm of W.L. Maloon, the honey man. The car was left at the Maloon house and accompanied by Mr. Maloon we went onto the Woodman lot so called. This particular lot was scouted last winter and marked with stakes.

To show how bad the infection is in some places, this lot is used. The scouts measured off a plot of the woods 50 feet by 200 feet. They counted 158 pines in this area, and found 142 of them infected. This infection means that these 142 trees will eventually die, most of them long before they reach maturity. So if this condition existed all over Maine, (fortunately it does not) where would the Maine pine be in a few years?"*****

(Extract from THE LEWISTON (MAINE) DAILY SUN, May 24, 1924.)

REPORT ON WESTERN BLISTER RUST WORK

June 1 to June 30, 1924.

* * * * *

1. Cultivated Black Currant Eradication.

Montana: Since June 1, Mr. Johnson has been working along on cultivated black currant eradication, on actual eradication and on preparation of county records to facilitate more intensive and accurate work of his men, after July 1. He reports his county records as progressing in good shape, and actual eradications as follows: Plantings 19; plants, 380.

Idaho: Six men in the field since June 16, working under State funds, in Fremont, Clark and Butte counties. Eradications secured as follows: plantings, 282; plants, 2511.

Washington: Preparation of county records for southeastern counties of state. Eradications secured in Spokane County as follows: plantings, 21; plants, 266.

Oregon: Eradication started June 16, with 5 men in the field in Marion county. Eradications secured as follows: plantings, 42; plants 694.

The total figures for eradication in the above 4 states are; plantings eradicated 364; plants eradicated 3851.

2. Educational Work in Timber Protective Associations.

According to agreement with the five timber protective associations of northern Idaho, each association employs one man for blister rust work, and this Office employs one man; and the two work together in explaining blister rust to association employees and also making reconnaissance studies. In addition, the Priest Lake Timber Protective Association is assigning three additional men to reconnaissance, to work with three men from this office.

The sixteen men employed for this work by this Office and the Associations were assigned to the local control camp for the period June 18 to 28, for training. Their training is described below.

3. Local Control.

The local control project for this field season will be conducted in the Upper Priest River Valley, Idaho, on the Kaniksu National Forest. Preliminary work was started on June 16, when 8 men undertook the establishment of camps. On June 16, 35 men went into training for this work. These men consisted of those tentatively assigned as foremen, reconnaissance recorders, and advance scouts, and the sixteen educational men described above.

During this period, these men received training, on the ground, in both Ribes eradication and reconnaissance. A special effort was made to give these men, who are to act as leaders in their work, a general conception of the problem. In the training for Ribes eradication, every man worked in a crew, and also acted as foreman of a crew for his proportionate share of the time. In reconnaissance training, they were given special practice in standarization of their pace, estimating timber, figuring density of brush, the use of the Abney level, and topography work. At the end of the training, each reconnaissance crew worked over the same strip, their results compared, and all differences discussed.

In addition to the specialized training, a number of meetings of all the men were held, in which the general western blister rust program was explained and discussed, and appearance and nature of blister rust and identification of Ribes thoroughly gone over. Mr. F. T. Carroll, Fire Assistant on the Kaniksu Forest, and Chief Fire Warden of the Priest Lake Timber Protective Association, addressed the men on the subject of fire prevention and suppression.

At the close of the training period, more definite assignments of work were made, based on the showing of each man on the several types of work.

During this training period the camps have been established, the movement of supplies to the camps gotten into proper running order, and the men given preliminary training. The work is now in proper order to take care of the 40 crew men reporting to Spokane on July 1, and to be immediately transferred to the field.

Stephen M. Wyckoff.

Early Appearance of Telia

Mr. F. E. Gould, of Topsfield, Mass., has just reported (June 20, 1924) finding an infected wild red currant showing the telial stage of the blister rust. He asks whether this is not unusually early.

The earliest record according to Dr. Perley Spaulding, Bulletin 957, "Investigation of the White Pine Blister Rust", (page 72) is June 2 at North Conway, N. H., in 1918. For southern New England the earliest record for telia is June 17, 1916.

What is a Clapboard and Why?

This first mention of clapboards in New England is found in Governor Winthrop's Journal as follows:

"Mr. Oldham had a small house near the Weir at Watertown made all of clapboard, burned August 1632." Clapboards were first used to cover the clay walls of houses and were first named "clay boards," which in time became changed to clapboards.

Extract from News Letter, of N. H. Forestry
Department, June, 1924.

Editor: Undoubtedly these were white pine clapboards, for that wood was one of the first to come into general use in the northern colonies.

EXHIBIT SECTION

Blister Rust Exhibits at Large Fairs.

It is true that Blister Rust exhibits at large fairs do not pay!

R. W. M., broadcasting on "Fair Exhibits" from the Gardner Chamber of Commerce in the Massachusetts Number, apparently does not believe that they do.

Why don't they pay?

We have a message, in our work, that is of general interest to everyone - and almost everyone goes to the large fair. It seems that we should be able to put our message across to advantage there as well as before a smaller group of people. Is the difficulty not found in the exhibit itself rather than in the size or attitude of the crowd?

The large fair or exposition demands a more extensive exhibit, with more "drawing power", than does the small fair, in order that the exhibit may compete successfully with the others in the same building for the attention of the visitors. At the large fair, usually a smaller proportion of the visitors are pine owners, which means that the results obtained from such an exhibit will be of a different nature. That is, more moral support, and fewer requests for inspection, proportionally will be obtained than at the small fair. It should be remembered that intangible results, such as moral support and public appreciation, are as necessary and important as the more tangible ones.

The large fair requires more and better work from the men taking care of the exhibit. Visitors are more numerous and interest more difficult to arouse. Some attendants make the mistake of picking out only "likely looking" visitors to talk to, but the best results are obtained from telling the Blister Rust story to all who step near the exhibit, without waiting for them to begin to ask questions. Taking the "offensive", with moderation, is important, as a rule, I believe - it places the attendant in a stronger position, offers more opportunity for putting across all of the vital facts of the story, and arouses and increases the interest of the visitor that might otherwise have been self-subdued. In starting such an "offensive", a good opening sentence that arouses interest and sells the attendant's personality at the same time, is essential.

There are many drawing cards - even for those people who come to be amused. For instance, at Farm Bureau picnics in the past year, gooseberry races and leaf guessing contests attracted the pleasure seekers and induced them to take a little Blister Rust information along with their fun. It is easy to arouse the curiosity of that type of people by the "teaser method". A poster headed "Blister Rust" would have been almost a total loss in New York State, but the one used, reading "\$1,000.00 REWARD" is very successful, largely because it arouses curiosity. Mechanical action or noise, and unique features and effects are also good drawing cards. The biggest crowds and the most interested crowds, at fairs are found near booths where some action is taking place, where machinery is in operation, water is falling or running, and so forth.

For the large fair, we need more originality and punch in our exhibits and exhibitors, and greater adaptability to the class of the fair or exposition, to the mood of the crowd, and to the position of the visitors as regards white pine.

A. E. Fivaz,
Blister Rust Specialist, N.Y. and Vt.

Demonstration Plots Popular in New Hampshire.

Six demonstration plots of an acre each have been laid out and studied in different districts in New Hampshire. The percentage of infection ranges from 12% to 70% to the acre and up to 16% have died. Most of this infection started in 1916 or 1917. In one plot it began in 1912. In none of the plots have any trees been found to have recovered from the disease. It is the plan to lay out an acre plot in each of the other districts in the states.

What is in a Name?

Queen of White Pine is the foundation cow in the Rupprecht herd of Jerseys at the Copperdell Jersey Farm in Wisconsin, according to the Wisconsin Agriculturist of Sept. 1, 1923.

Editor. I'll wager the owner of the jerseys has a good white pine grove. By the way, did you-all read Lovejoy's Article on Cows and White Pine, in the Country Gentlemen, of March 11, 1922. It is worth reading. Let me loan you my copy.

Roy G. Pierce
Washington

PERMISSION GIVEN TO PLACE BLISTER RUST CONTROL EXHIBITS IN POST OFFICES

OFFICE OF THE POSTMASTER GENERAL
WASHINGTON, D.C.

June 20, 1924.

The Honorable,
The Secretary of Agriculture,

My dear Mr. Secretary:

I have your letter of June 16, 1924, requesting permission to display in the lobbies of post offices located in certain states, posters, photographs, et cetera,* relating to the campaign now being conducted to accomplish control of the white pine blister rust.

The Department will interpose no objection to the display of such posters in the lobbies of post offices located in the states mentioned,** providing the following notation is placed thereon: "Displayed by Authority of the Postmaster General."

I am very glad to cooperate with you in giving publicity to this campaign.

Very truly yours,

(Signed) John E. Bartlett
Acting Postmaster General.

NOTE:

* Publicity material mentioned in letter of June 16 included "charts, signs, posters, pictures, and window exhibits usually composed of specimens and photographs or specially prepared panels."

**The states mentioned are as follows: The New England States, New York, New Jersey, Pennsylvania, Michigan, Wisconsin, Minnesota, Montana, Idaho, Washington, Oregon, and California.

Editor: A rubber stamp with the words "Displayed by Authority of the Postmaster General" can be obtained and used by agents to stamp material exhibited in postoffices. Always consult the postmaster, show him the above letter, and secure his permission before placing blister rust exhibit material in a postoffice.

CONVERTED

There was a man in my County and he was wonderous wise,
He thought that all this Ribes talk was but a batch of lies.
While walking thro his woods one day, he spied a stranger there,
The young man introduced himself; he had some time to spare.
They talked about the weather and they talked about the pine
But when they mentioned Ribes, the owner had no time.
As they walked among the pine trees, they spied a dead one here and there.
This opened up the farmers eyes and threw him one good scare.
He asked about the Ribes bush; how it killed the stately pine
And he was ready then to talk. He forgot his precious time.
The next day about sunrise, the farmer and his son
Were scouting every stone-wall and checking every run.
Now the lot is Ribes free; no blister rust in sight.
Another owner on our side, another sees the light.
This goes to show you agents that despite all they say;
If we are persevering, we'll surely win the day.

S. D. Conner,
Agent, Cumberland County, Maine.

HUGE PINE CUT IN MAINE

Mr. W. O. Frost reported sometime ago a large white pine
cut at Belgrade Lake, Maine,, and now adds to this report several
interesting photos of this big tree, before and after cutting.
"The butt log 12 feet in length scaled 999 feet and must have been
nearly 41 inches in diameter."
Editor. This must be an example of the big things they do down in
Maine. Wonder how old that tree was?

HOW A LARGE WHITE PINE-USING COMPANY IS INSURING ITS FUTURE.

How is a mill to develop a continuous source of raw material in its immediate neighborhood without actually owning the land and doing the work under its own direct control? The New England Box Company operating in Massachusetts and southern New Hampshire has undertaken to solve this problem through the establishment of a forestry extension bureau at the service of independent timber growers.

This is a field of the most intense "selfish" missionary work. It means first the assurance of a price for the product which justifies the work and care in producing it. It means a coordination of spirit and resource between the pulp manufacturer and the timber grower. Because the units are small, the pulp manufacturer must carry the overhead, - the development of a forestry department headed by the best man obtainable. The success of such an enterprise in the end will rest entirely on the understanding between the grower and the purchaser.

Extract from News Letter of American Paper and Pulp Association,
Woodlands Section, April 9, 1924.

Editor: This is helpful cooperation. Do your cooperating pine owners know of this extension bureau?

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NO MAN RISES WITHOUT BEING KNOCKED DOWN A FEW TIMES.

- - - - -

ENERGY AND EARNESTNESS CREATE CONFIDENCE AND SUCCESS.

- - - - -

NORTH CAROLINA'S WHITE PINE EXCELS NEW ENGLAND'S.

White pine planted on the Biltmore estate in North Carolina 24 years ago is already comparing favorably in growth with natural stands of the same age in New England, according to tentative estimates made recently by the Appalachian Forest Experiment Station, Forest Service, United States Department of Agriculture. On sample plots in the Pisgah National Forest, yields of 5,000 cubic feet to the acre are being obtained compared with an average of 3,000 cubic feet for New England white pine of the same age on similar sites. The computations made in North Carolina are only approximate, but at least a considerable proportion of the apparent advance over New England timber is easily substantiated in the considerably greater height growth attained in the Southern stands, together with an equal or greater diameter. This increased growth is attributed to the equable climate of the Southern mountains which allows the trees a longer growing season.

PLANTING IS ON THE INCREASE IN PENNSYLVANIA

"Approximately 9,500,000 trees were distributed from the Mont Alto and Clearfield State Nurseries in Pennsylvania this season, the largest number in a single year, twice as many as in 1923 and three times the 1922 output. Ten thousand acres were reforested this spring. The trees are white, pitch, red, Scotch, bank and short-leaf pine, Japanese larch, Norway and white spruce, black walnut and white ash."

(Extract from AMERICAN NURSERYMAN. June 1924, p. 146.)

WHAT SHOULD NEW ENGLAND GROW.

This is the title of an article by Arthur W. Gilbert, Commissioner of Agriculture for Massachusetts, in the Country Gentleman for June 7. Mr. Gilbert says "States and natural geographic regions as well as individuals must sometimes or other learn what they are best fitted to do and then do it, if they hope for success. New England is now systematically engaged in determining to what she is best adapted and how she may most fully grasp her opportunity and work out her manifest destiny. The immediate task of the Pilgrims was to produce food, clothing and shelter. And fundamentally the task is still the same, although in the meantime the New England population has undergone the change from 100 per cent rural to 93 percent urban, and although our production and supply figures show that we now import 80 percent of our food as contrasted with 100 percent home production in early colonial days.....

In making a New England inventory along those lines some interesting facts come into the spotlight. For example, Massachusetts produces only enough hogs to supply her people one week, enough sheep for one day, enough eggs and poultry for six to ten weeks, enough beef for two dinners, butter for perhaps one breakfast biscuit, vegetables enough for eight to ten weeks and sufficient potatoes for a month. One quarter of the people of the United States live within 250 miles of Boston, and New England imports a half billion dollars worth of food annually. Of course no one imagines that New England will ever again become self-supporting from a food standpoint. But we are all agreed that a prosperous agriculture, developed along the most promising lines, is absolutely vital to the continuance of the industrial supremacy of New England. What should we produce and what should we not produce?"

Editor: How about a white pine crop on every acre unsuitable for agriculture and best suited for that species? White pine can be shown to be a paying crop at the present time. It will pay better in the future, when the bulk of the southern pines will be cut, and the only real competition will be from the western timber with its high carrying charges for freight.

P U B L I C A T I O N S

Blister Rust

Brockway, Earl M. Protect white pine. In early spring gooseberry and currant bushes near pines should be destroyed. The Plymouth County Farmer, Brockton, Mass. Vol. 9, No. 5, page 1. May, 1924.

Elliot, F. A. White Pine Blister Rust in Thirteenth Annual Report of Oregon State Forester, for year ending December 31, 1923; 1924. This gives a summary of the work in Oregon, and continues the report found in the 12th annual report of the State Forester.

Martin, J. F. Protecting White Pine From the Blister Rust. Bulletin of the Green Section of the United States Golf Association, Vol. IV, No. 6, pages 144-146, June 21, 1924.

White Pines

Metcalf, Haven. Less Serious Diseases of White Pine. Bulletin of Green Section, United States Golf Association, 4:6; p. 144-146, June 21, 1924.

Middleton, William. Insects Injurious to White Pine. Bulletin of Green Section, United States Golf Association, 4:6, p. 148-150. June 21, 1924.

Mulford, F. L. White Pine As An Ornamental for Golf Courses. Bull. of Green Section, U. S. Golf Assn., 4:6, p. 142-143.

Forestry

Hicock, Henry W. Better Forests for Connecticut. Forestry Publications No. 14. Connecticut Agricultural Experiment Station. Good photograph of thinned white pine plantation 28 years old shown on page 139. Mr. Hicock summarizes the "Benefits to be expected from the improvement of the forest."

1. To the Owner:

- (a) Winter employment for farm labor and teams.
- (b) Full utilization of land, no unprofitable acres.
- (c) Income more evenly distributed throughout the year.
- (d) Greater farm value if the owner wishes to sell.
- (e) Larger loans from the Federal land bank.

2. To the Community:

- (a) Plentiful domestic lumber with low freight rates.
- (b) More wood working plants resulting from an assured supply of material. This means closer utilization and better prices for woodlot products.
- (c) Better protection of water supplies.
- (d) Increased value of the forests for recreation.

AUTO DRIVERS - ATTENTION !

The following "Rules For Use Of A Ford Car" were seen on the car of the Forest Supervisor of the Nebraska National Forest, and I believe are found on every Ford Car, and some others in District 2 of the Forest Service. Pasted on a cardboard and covered with celluloid, these instructions were tacked up on the dashboard.

R. G. Pierce.

- "1. Keep all parts greased and oiled. Completely drain crank case and refull with fresh oil every 500 miles. Use good grade of medium oil.
2. Keep radiator full of CLEAN water.
3. Keep fan belt tight.
4. Close the throttle before turning off ignition when stopping motor. If the throttle is opened and the motor speeded up it simply draws pure gasoline into the cylinders to leak through and dilute motor oil.
5. Keep the tires inflated to full pressure indicated on the tire. Under-inflation ruins tires. Pump them up at least once per week. Always carry a tire guage.
6. Keep bolts, nuts, and screws tight everywhere.
7. Keep everything under the hood clean. Don't let grease and dirt accumulate.
8. Wash body and running gear often as practicable. Don't let mud and grease accumulate.
9. Except in serious emergency, such as a Forest fire, NEVER drive this car over 25 miles per hour on smooth straight roads, and SLOW DOWN on rough roads and in the mountains.
10. Don't put on a load exceeding 800 pounds. Distribute the load to give balance.
11. In descending hills use the motor to brake with. Go easy on foot brakes.
12. Use judgment in everything you do with this car."

A. S. PECK,

District Forester. District #2."

OFFICIAL ORDERS

B.P. I. Memo 82:

June 26, 1924.

Gentlemen:

In a number of cases the submittal of reimbursement vouchers has been very much delayed, resulting in uncertainty in the financial standing of various projects and generally tending to interrupt effective administration. Your attention is called to the fiscal regulations which assume the submittal of monthly accounts covering reimbursements, with the exception of temporary special disbursing agents who submit their accounts quarterly. It is important that accounts be submitted monthly and in all cases within 30 days after the close of a quarter. If for any reason this is not practicable, a satisfactory explanation should be made. Your hearty cooperation is requested.

Very truly yours,

(Signed) Wm. A. TAYLOR

Chief of Bureau.

Editor: Now that the fiscal year 1924 has closed, please see to it that you have no old expense accounts "up your sleeves," which have not been submitted.

SALARY ADJUSTMENT EFFECTIVE ON JULY 1

Order by President Puts Provisions of Field Salary Bill into Effect

"Under an order issued by the President, adjustment of salaries of members of the department in the field will be carried out beginning July 1 in substantially the same manner as if the field salary classification bill had passed in such a way as to comply with all of the technicalities.

As pointed out in last week's issue of the RECORD, the bill was passed by both houses, but was not presented for the approval of the President because of delay during the closing hours of Congress. Under the present plan the \$240 bonus now being paid field employees will be absorbed and made a part of their basic salary beginning July 1, and in certain cases further adjustments will be made in order to place the salaries of field positions on a basis comparable with the rates to be paid for similar positions in Washington under the classification act."

Extract from the Official Record at Department of Agriculture, June 25, 1924.

P E R S O N A L

Mr. Raymond E. Rendall former blister rust agent in Massachusetts in 1919, is now handling the 10,000 acre tract of woodland belonging to Bates College of Lewiston Maine. He has recently received a permit for bringing into the state 1,000 two year old white pine seedlings.

Appointments

Eastern Work

Callward, Floyd	- Agent - Montpelier Vt.	effective 7/1/24
Hinchman, Wm. H.	- Agent - Albany, N. Y.	"
Miles, Herbert J. Jr.	Pathologist - Putnam, Conn.	effv. 7/1/24
Phipps, Carl L.	- Agent - Portland, Me.	effective 6/23/24
Thompson, Wm. C.	- Field Asst. - Madison, Wisc.	" 6/16/24
Tucker, Allen M.	- Agent - Boston, Mass.	" 6/25/24

Western Work

W. C. Leth	Assistant - Moscow, Idaho.	effective 7/1/24
Vernon T. Patch	" " "	" "
Elva A. Snow	" " "	" "
Wm. S. Stone	" " "	" "
Richard B. Fehren	" Portland, Oreg.	" 6/16/24
Ezra M. Hornibrook	" " "	" "
Wm. E. Lewis	" " "	" "
Thos. D. Mallery	" " "	" "
Jno. E. Spurlock	" " "	" "
Earle G. Davenport	" Spokane, Wash.	" 7/1/24
Glenn A. Huber	" " "	" "
Walter F. Eupke	" " "	" 6/16/24
Thos. Large	" " "	" 6/21/24
Chas. F. Lackey	" " "	" 7/1/24
Jos. G. McMacken	" " "	" 6/16/24
Paul J. Moody	" " "	" 7/1/24
Harvey L. Paddock	" " "	" "
Edwin H. Steffen	" " "	" 6/20/24
Alvin J. Seltzer	" Seattle "	" 6/16/24

ON THE FIRING LINE

WITH

Ribes Bill

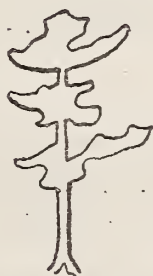
The one-act tragedy put on by the New Hampshire bunch put it across alright, alright. I recognized the villain in the play, and most of the actors. Personally, I like a little low-comedy stuff as a relief, but this was entirely missing. 'Tany rate this serious stuff shows how the New Hampshire bunch feels about the rust and its control. I'll bet they go over the top with their quota this year.

Some years ago an Agent asked me "When is a Currant?" I think he is right, too. I am still studying the subject, and am learning something about the various species of Ribes every time I get into the field, and something about the plants with Ribes-like leaves. Do you and your crew men know all the Ribes in your District, or do they pick Viburnum, or Rubus, or red maple occasionally?

That exhibit section is taking like hot cakes. State Leader Jack Frost has plans made to set up the tombstone in Portland on the old exhibit ground that has previously brought him so much publicity and favorable comment. It requires and Al exhibit to go into that Portland space, and Jack recognized at once what he wanted when he saw the New York tombstone. I found several other chaps who are looking for the right exhibit and several who have some fine ideas and even exhibits they have used. How about an 'ad' column to advertise both the "wants" and material? Anyway, send in your exhibit plans so that they can be printed for the other fellows.



BLISTER RUST NEWS



AUG 15 1924

U.S. DEPARTMENT of AGRICULTURE

Office of Blister Rust Control.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry
Washington, D. C.

THE BLISTER RUST NEWS

Issued by the Office of Blister Rust Control,
and the Cooperating States.

Vol. 8, No. 6.

Rhode Island-Connecticut Number

August 15, 1924.

"Hello there, Agent!

How did you like our State Series of News Letters? Some improvement, I should say! Do you know why I like it, because each of you had your share in it. Team work is what counts whether it is getting out a News Letter or pulling Ribes.

Another name for team work is cooperation. How about team work among you agents within the state, and with the next state to yours? Do you know the agent in the next county? He's not an unapproachable fellow. Get together with him; it will be to your mutual benefit.

For instance, somebody dropped me a line wanting some blister rust specimens. Now Agent, if I had 'em, I'd give 'em to you. I'd give you the "shirt off my back" if you needed it. But Agent, didn't you know that Sam Jones in the next county east had more fine specimens of blisters on pine and nice telia and uredo on skunks, and prickly gooses and spiny stemmed currants and cultivated blacks than any man in the state? Why he's been collecting and pressing his best diseased leaves whenever he found them. You know what he used? A little pocket size book he made out of blotters.

Ask Sam Jones for those specimens if you need them - but don't forget to reciprocate. Yes, that's a big word. Look it up in Webster.

Well, so long for this time. Here's hoping I'll see you at the fairs next month.

Ribes Bill

- 2 -
A TOUR OF SOUTHERN NEW ENGLAND.
By the "Blister Rusters".
- - - - -

Leaving Providence with O.C. Anderson in charge.

Is everyone ready? All right, lets go. Why didn't we start from the Biltmore? Well, this is Pine Street. We will start in an appropriate fashion any-way. No, Jack Frost, you had better drive the first car. Some of us, at least Mr. Cook remembers your actions at Ripogenus Dam last Fall. All the cars haven't bumpers.

Who is that figure on the State House Dome? It may be Riley in a poplar tree trying to get his bearings as he did at Kokadjo. On the way out of the city we have Roger Williams Park on the left which is the pride of the city. The appearance of those pine trees can be traced to the ice storm that we had recently, and is not blister rust.

We do not see many pines here in Cranston and West Warwick. These are two of the towns in which Ribes are permitted to be planted. Those evergreens across the Bay? Don't get ahead of the story, Perry. That is the plantation established on Pottawamut Neck in 1877 by Mr. Henry Russell. We will make our first stop there.

THE HENRY RUSSELL PLANTATION

POTTAWAMUT NECK, R. I.

Gentleman, meet Mr. Thomas G. Mathewson, who is in charge of this estate. He knows this plantation from A. to Z. We may properly call him the father of forestry in Rhode Island, because no one has done more to stimulate an active interest in forestry in this state than he. If I do not explain the details of this planting correctly, he will put me right.

Jack Corliss, there is a speed limit in Rhode Island. Anyway you can't drive through the plantations. Regulations will not permit, so you will all have to take off your coats and prepare for a hike, Andy, if you and Rankin must smoke that Blue Boar please keep in the rear. We do not need a smoke screen.

This first plantation of white pine was made in 1879, Professor Fenska from Syracuse has found that it is putting on 400 board feet per acre every year. Not so bad when you consider that the soil is nearly pure sand. Every tree that you see with the exception of the larger oaks and the red cedar was planted. Those red oaks were started from acorns. We are coming now to the first white pine plantation made about 1878. No, there was no eradication problem here. The soil is not adapted to Ribes, besides, Mr. Mathewson wouldn't let them grow anyhow. You guessed right the first time. These are Douglas Fir, and probably the first planted east of the Rockies. That planting on the right is Bull Pine. They are not doing as well as the white pine. The red pine you see are doing much better than either. Mr. Mathewson likes the white pine very well but the reds are his special pets. See what the weevil has done to the white pine. That tree was struck twelve times, but even so it will make fine box boards. The young pine (over 300,000) are badly weeviled but they are planted so close, about 4 X 4, that the damage is really very slight in the long run. What's that, Jack Frost, you ask if we eat lunch here. I think that you saw those wild grapes along the road as we came in here. No, we do not eat here. It is only nine o'clock. Any how those grapes are not ripe yet. You remember what happened to you and the grapes in 1919 and act accordingly.

There are about 400 acres in the plantation. We must hurry. The white pine you see ahead were planted on pure sand dunes. They are now putting on about 400 board feet per acre per year. That is not a bad growth on land that

otherwise would be comparatively valueless. We will ask Professor Collingwood to tell us what those fine-looking young trees are. He says "Douglas Fir," and they are the best Christmas tree stock available because they retain their needles in the house for a much longer period than any other evergreen used in the Christmas trade." Ahead of us we see the young red pines. They have averaged three feet in height growth every year since planted. Mr. Mathewson gathered a fine crop of seed from these 14 year old trees and has a good seed bed started. He says that white and red pine are the trees that Rhode Island needs and I guess you all agree. As our trip is a Blister Rust trip, we cannot spend time to see all the plantings of deciduous trees, but this place is a regular arboretum. Nearly every commercial tree, and a great many of the ornamentals that will grow in this climate, can be found here. Will you take the rest of the trip with us Mr. Mathewson? The fellows will be very glad to have you in the party. That is fine. There is room in the first auto.

We are now on the Boston Post Road. You do not see pine very much along the coast. The soil is ideal for white pine and we are trying to stir up an interest in reforestation among the property owners. In two more years the state hopes to have the Ribes eradicated from the forest areas and a real forestry offensive started. On the left you see the Saunderstown Military Reservation, also a fine view of the bay with Jamestown Island in the distance. That small plantation belongs to the War Department. Hodgkins found an infection there on one tree. You ask "one tree," Newman? Yes, one, and we are glad there are no more. All our infections are spot infections. We do not intend that they shall spread if we can help it.

Just a moment. This is - -

THE STATE AGRICULTURAL COLLEGE

KINGSTON, R. I.

Professor Stene, Extension Director and Collaborator in Blister Rust Control. work will join us here. Meet Mr. Stene, Gentlemen. He is always working for the best interests of agriculture.

Wait a moment. Mr. Detwiler wants to stop here. He says that he has seldom seen a better example of reproduction from seed trees. He is right, I think, you will agree. There are several hundred acres here in Richmond and South Kingston like this. Yes, the blister rust crew recently pulled those Ribes you see hanging on the fence. Andy, the crews are working near here aren't they? You can get to them in five minutes. They are a group of men we will be glad to meet. It isn't every day that this crowd can see a crew who are interested enough in the work to go on month after month with only the promise of pay in the distant future. You know we worked for two months without funds this spring and then our cooperator came to our assistance. That is real cooperation. Here they are. We will not bother with formal introductions. Dr. Martin says that they look like real woodsmen and he is right. They have all, with one exception, been on this work since 1919. Each man is an ideal Ribes chaser and the "goose" have no chance to live happily when they get going. Dr. Martin started us on the right track in Rhode Island and a great deal of credit for the efficiency of the work belongs to him.

As Mr. Filley is to meet us at Westerly, we must hurry on. This little Town is Wyoming and we will take a few moments to see a plantation started from broadcasting seed. The man who started this work, a white pine fan, recently passed away and the present owner does not know all the details. However you can see what broadcasting has done. The stand has been thinned. The block to

our right was very lightly thinned. You can see the difference between the two stands; the one stand averaging 8"D.B.H. and the other 5"D.B.H. where but little thinning was done. Conditions of soil and site are nearly identical. We hope to have more data on this lot ready for distribution shortly.

The new concrete road to Westerly is not as yet finished. We will have to detour. You can see that there is quite a lot of pine through this Wood River Valley. We will take a half hour now for a little pleasure ride and incidentally show you where blister rust was first found on white pine in Rhode Island outside a nursery. This is the Watch Hill summer resort, one of the prettiest in the country. The estate on the right with the white pine hedge about the garden is our oldest blister rust infection area. We will not stop as the infections have been cut out and the currants eradicated. Mr. Detwiler, this infection was caused by red currants. We will turn around now. Who said that? Someone said that we had better turn short or we would trespass on Massachusetts or Connecticut. Just for that we will stop for lunch before we get into Mr. Filley's hands. Let's tie on the feed bags in this restaurant.

Leaving Westerly, R. I., Guidance of W. O. Filley.

Gentlemen, you are now in the land of steady habits where speed laws are enforced, so please don't get ahead of the schedule. This is New London County Connecticut where native white pine is abundant only in the towns along the Rhode Island line. You may think the principal forest tree is the red cedar, but there are other species present--mountain laurel for instance. There is some real hardwood timber and much abandoned forest land suitable for planting with pine. As there are practically no wild Ribes in this section of the state, white pine can be easily protected from the rust. In fact, the only spot infections found in the county have died out naturally for lack of the alternate host.

Here at Poquonock Bridge, in the town of Groton, for instance, is a considerable plantation of white pine set out in 1909, German stock being used. Infected trees were located and removed from 1909 to 1917, but there were no secondary infections, and no ribes have been found nearby. In 1923 the only evidence of blister rust was a few dead trees.

Here we come to the Thames River made famous by the Yale crews,---with the help of those from Harvard. Of course, Harvard wins sometimes, but not this year. New London does not worry much about blister rust, but how its shipyard^s did eat up timber of all kinds during the war! It has one of the finest harbors on the Atlantic Coast.

From the Thames River to the Connecticut the most interesting things to a forester are the evidence of forest fires; hemlock, hardwoods and laurel in the woodland; cedar and birch in the pastures; no wild Ribes! - - What a country to grow white pine in! They sure need to be taught the value of growing white pine down here.

Across the Connecticut River to Saybrook and up the west side to Middletown through somewhat rougher country, but still no natural pine to speak of. Across the river from Middletown, a distant range of hills contains the Mesomasic Forest, the oldest state forest in New England. Mesomasic means rattlesnakes and there are plenty of them. No blister rust there, though, so we'll not cross over.

Instead we'll turn west toward Meriden passing through the plantations of the Middletown Water Board. This is a veritable city forest comprising several hundred acres of hardwood lands, and over one hundred acres of coniferous plantations. The oldest of these are white pine set out in 1904. Careful scouting has as yet disclosed no blister rust infection on pine, and all ribes have been removed.

Over Higby Mountain to Meriden and down to New Haven takes us across the famous Wallingford sand plains which ought to be forested with pine. Unfortunately, the land is held at such a high value for factory and real estate purposes that it remains to a large extent absolutely unproductive. Half way between Meriden and New Haven the state park at Wharton Brook forms a small oasis in the desert. We'll stop to stretch our legs and get a drink-----of grape juice, -----but pitch pine and red cedar are the only conifers to be seen here.

This park is one of twenty seven tracts, varying in area from one acre to 1700 acres, which the State has acquired either by purchase or gift for park purposes. Wharton Brook is mainly a wayside service station for auto tourists and is known from coast to coast as a good camp ground. Its fifty acres of woodland makes it an attractive spot for picnics as well.

Ten miles more to New Haven and we have just time to look at the Maltby Lake plantations of the New Haven Water Company before getting dinner at the Hotel Bishop, where we will put up for the night. We'd go to the Taft if it was not for that \$3.00 per day limit.

Now that we're through dinner we'll listen to a paper by R. C. Hawley of Yale and the New Haven Water Company on

FIFTEEN YEARS OF FORESTRY.

More than ten thousand acres of land on the water sheds of reservoirs furnishing water to New Haven, Connecticut and adjoining communities are owned by the New Haven Water Company. These lands lie on three sides of the city of New Haven, comprising eight principal tracts and numerous small areas, all within the distance of fourteen miles from the center of the city. The location makes possible management of fairly intensive character. The property has been

built up by the acquisition of lands which in most instances were or had been in farm ownership.

The New Haven Water Company finds its interest in forests and forestry because of the protective and economic values inherent to a properly managed forest cover. Financial returns on lands which must be owned for protective purposes are desirable but subordinate to the maintenance of the best protective cover. Better stream flow and sanitary cleanliness result as a consequence of forest protection. Forestry offers the best means compatible with protection for permanent and increasing financial returns from these lands. As a matter of fact, protection and profit are not necessarily antagonistic and can both be secured in the majority of instances.

Forestry has been practiced since 1907 and on one tract since 1900. In 1907 an arrangement was made whereby a representative of the Yale School of Forestry acted as forester for the New Haven Water Company. In this way, the property has been made to serve the purposes of a school forest as a demonstration ground for students and as a laboratory for research in silviculture. The extermination of the chestnut greatly decreased the productive power of the forest areas and made serious inroads upon the growing stock.

One of the most important silvicultural problems is the establishment and management of coniferous plantations. Much of the agricultural land owned by the company is so located with respect to water supplies that ordinary farm operations cannot be safely pursued. Hence this agricultural land and old fields are planted to secure the best protection and ultimate financial returns. The climate favors pines rather than spruces. White and red pines have been used as the principal species for forest planting. Over 1800 acres have been set out with pine, most of the older plantations and the largest acreage being white pine. Serious injury to white pine from blister rust is not apprehended because wild ribes are rare in the region around New Haven.

During the past 15 year period expenses for establishing and caring for 1800 acres of plantations have been heavy. The funds for the plantations have come from the proceeds of wood and timber sales in the hardwood type. Up-to-date total receipts from such sales have exceeded all expenses for forestry work. This relation can be continued. Planting of open lands is likely to progress actively for another decade and white pine will continue to be included in the program.

Three cheers for Prof. Hawley who isn't afraid of Blister Rust! Now we'll listen to "Duke" McDonnell, Blister Rust Agent of Litchfield County, Conn. on

DO YOU BELIEVE IN SIGNS?

In early days of automotive travel, say 1905 or so, the tourist whose journey took him over the dirt roads of New Jersey would frequently encounter signboards saying, "Dont Travel In The Ruts." Fortunately, the traveler of that ancient day was a "believer of signs," and so the dirt roads of New Jersey were evenly worn and quickly became famous for their unusual and remarkable smoothness.

Obviously the signboard was the keynote to the exceptionally good roads. But is it strange or is it not strange that there should be need for such signboards? Probably it is not strange. Almost anyone would instinctively take the course of least resistance, and temporarily the other fellow's ruts or tracks would appear to offer such a course. On the other hand it will be observed that the drivers, when reminded, appreciated the wisdom of preventing deep ruts which would not long offer a smooth course, and so they naturally obeyed the signs. It was, however, positively essential that the signboards be present.

Times have changed. This is an era of hard-surfaced roadways and not so

much thought is given to ruts in roadways, excepting possibly in the winter. Nevertheless, it is possible in the summer time for a blister rust control agent to get into a rut (and possibly a deep one) if he is not occasionally reminded to avoid following the courses of least resistance about some of his work. Hence, for example, the ruts as they might be called, of sometimes keeping shabby field notes, of failing to keep maps, interview cards, etc., up to date, offer a course of least resistance to an agent, who after a day or week of strenuous work, very likely considers that the keeping of most any record is a form of red tape of the most boresome nature. This of course makes it easy to get into the rut of neglect and through constant usage this rut, like all ruts, gets deeper and deeper until by the time the end of the year is met it may prove difficult and even embarrassing to get sufficiently out of the rut to make up one of the B.R E 3 yearly reports.

In avoiding the rut of neglect, the writer has become like the autoist of old "a believer of signs." A cardboard sign saying "DONT TRAVEL IN A RUT" is kept on his desk. The idea, although copied and although not new, has been stimulating and has proven most helpful. It is passed on highly recommended!

That's a thought to take to bed with you. Where you going, Filler? Off to the movies? Well, dont forget we start at 8 A. M. sharp. If anybody wants to see my office at the Experiment Station, come out at seven and watch me open my mail. Goodnight!

Leaving New Haven, 8 A. M., McDonnell in Charge.

Is everybody ready? Well then, lets go for there is a lot of territory to cover in Fairfield County. Yes, that is the Housatonic River we are crossing. Some bridge isn't it? Cost the state a million dollars.

We have been riding over the Boston Post Road from New Haven and are now entering Bridgeport, the largest industrial center in Connecticut. It is fortunate that we're not planning to stop at Bridgeport, as everyone looks terribly hot. Too bad they don't have a lot of pine trees nearby to cool things off. Those last three blocks of factory buildings we just rode by belong to the Remington-Arms Company. It sure is some big plant, and there are others which we have not seen.

Now we are approaching the pine plantations of the Bridgeport Hydraulic Company there at our right. The plantations extend intermittently along both sides of this main highway entirely across two townships. Some planting! As you see, the plantations are made up of white, red, and Scotch pine with occasional plantings of larch and spruce. Must be about 1,000 acres all told and over 1/3 white pine.

What was that? Is there any blister rust in these plantations?

Not in these particular plantings so far as we know, but there is in another group of pine in the township of Shelton.

Is the Bridgeport Hydraulic Company still planting pine?

Yes, about 50,000 trees a year including all species.

One of the oldest white pine plantations in Connecticut is located nearby and we will visit it next. Mr. Filley has the dope on it, so listen to him for awhile.

GREENFIELD HILL PLANTATIONS

Fairfield, Connecticut.

These consist of about thirty acres of white pine and European larch, partly pure, partly mixed, which were set out in 1886 by Mr. Frederick Bronson as an example of practical forestry to his neighbors. He paid about \$33 an acre for

the land. The trees cost \$324 and the net cost of planting (including cutting birch, removing stumps and stones, and harrowing) was \$560, or a total cost for establishing the plantation of \$884, almost \$30 an acre. Rather expensive demonstration but he got results.

From 1902 to 1912 thinnings were made by students of Yale Forest School. Most of the larch was removed from the mixed stands and sold at a profit for stakes to mark oyster beds in Long Island Sound. Since 1912, owing to changes in ownership, no interest in improvement cuttings has been shown, but the trees keep on growing just the same. As an example of the possibilities from planting white pine this stand would be hard to beat, in spite of high original costs and carrying charges. No Ribes in the immediate vicinity and no blister rust. Q. E. D. Drive on McDonnell.

This is Danbury, the great hat city of Connecticut. The county Farm Bureau office is located here and the blister rust agent uses the same office as his headquarters, when in the county. There is very little pine in or around Danbury, but it is a good place to eat, so lets have dinner at one of the hotels. It will do us good to stretch our legs and have a good smoke, to say nothing of having a good meal.

There are innumerable estates in this county having large ornamental white pine plantings. We might spend this afternoon looking at some of them in Ridgefield, Wilton, New Canaan, Stamford, and Greenwich townships, but our itinerary takes us up into Litchfield County. Of course, there are other townships having large pine plantings, in fact 21 of the 23 townships in Fairfield County have plantings which are visited by the local blister rust agent. There is, however, practically no native pine in the county to be inspected and protected.

You will find that in general the ornamental plantings we are now seeing consist of screens, windbreaks, borders, and clumps. For the most part they receive at least some attention from caretakers who remove and destroy dead and dying limbs or trees as soon as noticeable. This often makes it difficult to detect the presence of rust, although on the other hand it will tend to control the spread of the disease somewhat.

The principal points of interest in Ridgefield, New Canaan, and Greenwich are the extensive ornamental plantings. Spot infections have been found on white pine in each of these townships. In Wilton we find the Street plantation, where the first blister rust infection on pine in Connecticut was discovered. So thorough has been the eradication of infection that no signs of the rust have been visible for several years. Finally, at Stamford we will visit the plantations of the Stamford Water Company, where we will see how excellently both white and red pine will grow if given reasonable care. We will probably not find blister rust in these plantations or anywhere else in Stamford.

In leaving Fairfield County it might be mentioned that few wild Ribes have been found and that the principal Ribes danger comes from the cultivated and escaped plants which are common throughout. Blister rust infection has been found in six townships in the county and it is interesting to note that five of these townships border on or near New York State.

Now dinner is over and we can hit the road again. Twenty-five miles to the next stop, so hold your hat while I step on the gas. Crossing the Housatonic River again, we see plenty of hemlock but little pine, except occasional ornamental planting. Here's Southbury, where Hicock was brought up. Shouldn't think he'd know a pine tree when he saw it. Wait a minute! What's that on the hill to the north. Sure, that's white pine---real timber too. It's a public park which belongs to the town of Woodbury. Must have McDonnell look it over again for Blister Rust.

Well here we are at Quassipaug Lake between Woodbury and Middlebury with something worth while to show you in almost 1,000 acres of forest plantations belonging to Mr. Harris Whittemore. Hicock will tell you about them.

THE WHITTEMORE PLANTATIONS

Middlebury, Conn.

One of the best examples of private reforestation on a large scale is located near Middlebury, Connecticut. Mr. Whittemore started to reforest in 1907 and during this year and the two following he used white pine exclusively, the stock being imported from Germany as two-year seedlings. Over 250,000 trees were set out during these three years. Blister rust was introduced on this German-grown stock and Mr. Whittemore received his share of infected trees but fortunately his property lies in a section where wild Ribes are quite scarce. Cultivated bushes caused the disease to spread locally at several points but since the removal of these bushes the plantation has developed no new infections, and the disease is considered well under control.

Since 1910 other species have been planted in addition to white pine, and inclusive of 1923 the following amounts of stock have been used; white pine, 550,000; red pine, 280,000; Scotch pine, 65,000; white spruce 70,000; Douglas fir 11,500; balsam fir, 1,000; Norway spruce, 1,750; larch, 25,000; hemlock, 6,000; Arborvitae 2,200; and hardwoods, 22,000. This totals slightly over 1,000,000 trees. During 1924 about 50,000 trees were set out.

Except for a few thousand trees used for ornamental purposes, the plantings have been made for timber production with an average spacing of 6x6 feet. Some planting has been done every year since 1907 (1917 and 1918 excepted) the amount varying with the ability to get stock and with labor conditions. The least number planted any year was in 1923 when only 16,000 trees were used,

while the maximum was in 1915 when 235,000 trees were set out. Planting and other forestry operations are carried out by the regular help employed on the property.

Although the results obtained have been most gratifying, these plantations should not be looked upon as absolutely ideal from the forestry standpoint. Some of the land used is good enough for tillage and therefore too good for growing trees. On such land the trees are growing at a rate which is abnormal for the region. Weeding to release conifers is often more thorough than is needed. An attempt to reforest a muck swamp by building up mounds to set the trees on was an interesting experiment, but more expensive than the results warranted. No criticism of the owner is intended but it seems only fair to point to these things because for the average owner forestry, to be practical, must pay its own way, and it is questionable whether some of these plantations will yield enough to pay back all the costs which might properly be charged against them.

Off for Litchfield County Under Guidance of A. D. McDonnell.

Litchfield County contains 611,184 acres of land and is by far the largest county in Connecticut. It is there that most of the blister rust infection of the state is centered, and this in turn is chiefly confined to the northwestern corner of the county. It is here also that wild Ribes are found in greater quantities than anywhere else in the state.

An automobile trip to see blister rust may well start at Watertown or Thomaston, which are below the native white pine belt, and proceed through Morris to the White plantations in Litchfield near Bantam Lake. There are between four and five hundred acres of native and planted pine growing upon this estate, of which all the native and about 50% of the planted stock is white pine. Blister rust has been found on both the native and planted pine. Investigation by the local blister rust agent revealed the presence of quantities of wild black currants

and a crew was put to work this spring to eradicate them. Over 16,000 of these bushes were removed. In one place the crew reported eradicating 5,000 plants from approximately two acres of ground which is the highest average per acre yet recorded in the county. There are also the Curtis plantations of about 300 acres in Litchfield. Here some of the original stock was imported and blister rust can be found in a number of places. As Ribes eradication has been completed no new infections have been discovered lately.

From Litchfield we will proceed to Torrington to visit the plantations of the American Brass Company now a subsidiary of the Anaconda Copper Company. This concern has planted between 800 and 1,000 of its open forest land to pine. The exact percentage of white pine is not known, but last summer there was sufficient to keep an eradication crew of six men on the go for over two months. Nothing but spot infections have been found on the Brass Company's land; and only a comparatively few ribes bushes were found.

From Torrington we will go through Goshen on our way to the Mohawk State Forest. The Mohawk Forest contains over 2,000 acres, principally sprout hardwoods. A fire tower is located at the top of Mohawk Mountain and during the fire season a man is on duty watching for fires. There is very little native white pine, but considerable white and red pine have been planted by the State Forester. The eradication of Ribes on the forest land has been completed.

From Mohawk Forest we will go to Cornwall and in doing so we begin to encounter native white pine in appreciable quantities. The objective in going to Cornwall will be the Cathedral Pines. This stand was featured in the first Blister Rust movie film. It has been described as follows by State Forester, A. F. Hawes.

THE CATHEDRAL PINES

"Recently the writer had an opportunity of measuring what is probably the best stand of pine and hemlock in Connecticut. This is a piece of about 20 acres

in the town of Cornwall. The trees are from 125 to 150 years old, and from 100 to 140 feet high. The largest trees are 36 inches in diameter, at breast height, and are estimated to contain 1770 board feet. Only 13 3/4 acres were measured. After making a 10% deduction for rot and defects, the average stand per acre was determined to be 67,000 board feet. Practically 80% of the stand is white pine; 19% hemlock; and 1% hardwoods. There are 164 trees on an average acre, of which 94 are pine, 64 hemlock and 6 hardwoods. This is undoubtedly a remnant of the original Connecticut forest, as the land is rough and rocky and was never cleared for agriculture, as was the case with much of the New England land which is now covered with pine. Dead trees have been removed from time to time, and probably, formerly other trees were taken for home uses, but there has been no attempt to practice forestry. There are undoubtedly individual acres where the stand runs as high as 80,000 feet, and indications are that it would be perfectly possible to raise 100,000 feet to the acre in 125 years by good management. As this stumpage is easily worth \$15 per thousand feet, the present value is about \$1,000 an acre."

Ribes eradication has been nearly completed in all of Cornwall township.

The next point of interest is the State blister rust camp located on the Housatonic River near Falls Village. Mr. Hicock is largely responsible for the camp organization and will tell us about it after supper, for we shall spend the night here.

THE BLISTER RUST CAMP.

Falls Village, Conn.

Since 1916 Connecticut has used the system of a centrally located camp in preference to boarding men in town, as is done in many of the other states. Until 1922 men were hired by the month exclusively. Since that time the policy has been

to hire such local men or boys as prove satisfactory, placing them in crews with those hired by the month. The type of men used are young fellows, preferably sixteen years of age or over who have finished high school or are partly through college. Such men are usually more easily handled than laborers picked up at random. These men, unfortunately, are not usually available until June 15th and much can be accomplished in the field before that time. For this reason one crew is usually made up about May 1 of experienced men from previous years and others who are available, and from this crew selections are made for foremen for the other crews as they are made up.

The lodging and feeding of from twelve to twenty-five men and doing so comfortably and economically is something of a problem. Sleeping quarters are 12 x 14 tents (with flies). These are mounted on portable frames which consist of floors, three foot side walls and the necessary plates and rafters. A wall tent mounted on such a frame has six feet or more head clearance and is dry and comfortable at all times. Equipment for each tent consists of double deck steel bunks and cotton mattresses. The men are required to furnish their own blankets. A tent will accommodate eight men although it is not usually planned to put more than six in it. It might be added that the tent frames and steel bunks have been in service since 1917 and are still in good condition.

The kitchen is a tent and frame similar to the one described above but fitted up with the necessary serving and eating tables. Cooking is done with a four burner oil stove and baker. Special stress is put on cleanliness in the kitchen, the disposal of garbage and other kitchen refuse, a clean supply of water and a sanitary latrine. These things have been found to be absolutely essential in keeping up the health and morale of the camp. One man is detailed to the job as cook. His duties are to plan and get the meals, purchase supplies and police camp. He washes the dishes after breakfast but is assigned two men to

help with them at night. When there are less than ten men in camp no full time cook is employed but the men take turns preparing the meals and policing.

Supplies are usually purchased locally, as this stimulates interest and helps to turn town funds back where they came from. It has been found most economical to purchase the best in food materials, as cheap products usually end up in the garbage can in addition to causing dissatisfaction. The food is plain but substantial.

In a large camp one tent is usually set up for an office and is occupied by the camp foreman and scout.

The above is a general description of the various camp units which vary in number with the number of men employed.

The 1924 camp is located on the west bank of the Housatonic River, half a mile north of Falls Village on the site of the village of Amesville, which was once a thriving community but is now represented by about twenty cellar holes. Camp consists of two sleeping tents, a cook tent and office tent. Water for cooking and drinking comes from a good spring and the Housatonic offers bathing facilities which are always desirable in any camp.

The camp personnel is as follows:---

- A camp foreman who has charge of all the eradication work in the field.

- A scout who goes over the ground ahead of the crews, checks up behind them and does such mapping as may be necessary.

- A cook whose duties are described above.

- Four foremen in charge of crews.

- Fourteen laborers or crew men.

In addition, ten men are hired locally. They board at home and join their crews each day. Crews consist of five or six men including the foreman, who works in the line or behind it as the occasion demands.

A Ford ton truck and two light Ford trucks are necessary pieces of equipment and are used in transporting men and supplies.

This completes the day's program, and we will now give you a chance to try out the camp equipment over night.

8 A. M. Off again with McDonnell in the lead.

From the camp we proceed to North Canaan to visit another crew consisting of local help under the direction of a State foreman. This crew is endeavoring to complete the Ribes eradication in the town by the end of this season. Indications are that they will succeed.

Next we will enter Norfolk township. About 2/3 of the pine areas in this town have been eradicated, and it is hoped to secure cooperation for eradication of the balance during the next season. It will be possible in Norfolk to check the efficiency of the previous eradication work, as a period of five years has elapsed since some of the work was done. Checks made by the state scouts and the local blister rust agents have revealed very few Ribes remaining in most cases. Very little recent pine infection has been seen.

In Colebrook township conditions are much the same as in Norfolk; namely, that most of the pine areas in the town have been worked and that checks upon the eradication work indicate that the protection was reasonably efficient. It may be noted here that Norfolk and Colebrook are the only towns in which skunk currant occurs. In fact, the Connecticut Botanical Society reported this species as very rare in Connecticut. The first two years of eradication disproved this statement completely as it was very abundant in the two towns mentioned.

The route we are now following is the old Green Woods Road over which the stage coaches of Colonial times travelled from Hartford to Albany. Most of the towns along it still have considerable white pine, but wild Ribes become less abundant as we go east and the amount of pine infection is reduced accordingly.

As we pass through Winsted let's ask Det if he remembers the Hotel Winchester. Four years ago this summer Det had the Winsted police force all set to chase him to Albany. He "accidentally" traded bags with a salesman, and nearly got away with it. The only thing that saved him from a court record was his well known diplomacy.

Filley says we must hurry on, so he will take the lead for the rest of the day. From here on nothing but spot infections have been found, and these are very scattering. We leave Litchfield County at New Hartford and practically leave the wild Ribes behind us, although occasional specimens can be found in most of these northern towns. Pine stands are rather scattering in Hartford County, and reproduction is not as abundant as further west, but some of the towns north of Hartford in the Connecticut River valley have considerable native white pine as well as plantations. The most extensive plantations are those of the Hartford Water Board. They have nearly 300 acres of pine plantings surrounding their reservoirs in the towns through which we are passing. These have been thoroughly scouted during the past year, but no serious infection has been found. Turning north through Simsbury we pass a small state forest where considerable white pine has been planted, but it appears to be in more danger from railroad fires than from blister rust. Still further north and east, we come to the Rainbow Experimental Plantations of the Connecticut Agricultural Experiment Station. Here is a tract of about 140 acres of sandy land on which forest planting was begun 22 years ago. Although many other species have been used, white pine predominates, but as yet no evidence of blister rust has been found here. The weevil is much more active as in most plantations throughout the state.

Another half hour's ride brings us to Hartford where we have just time to visit the office of State Forester Hawes before we eat lunch. His office is connected with that of the State Park and Forest Commission, by which he is appointed.

Although Connecticut was the first state in New England to purchase land for state forests, it has acquired only 10,000 acres of such land in 22 years. The Connecticut Forestry Association is backing a movement for the acquisition of at least 200,000 acres in the next ten years.

Mr. Hawes is also State Forest Fire Warden, and is justly proud of using what is probably the tallest fire lookout tower in New England, if not in the country. In connection with the formation of a forest protective association in the region just west of Hartford, he was able to secure the use of the tower of the Travellers Insurance Company building, which overlooks most of Hartford County.

Well, if you've all finished lunch we will hasten on across the Connecticut River again, through East Hartford and Manchester into Tolland County. Our first objective is Storrs, where A. E. Moss will show us the pine plantations of the Connecticut Agricultural College. He is responsible for most of these, having been giving forestry courses here since 1913, and having planted up some cutover land and open fields each year. He is not worrying much about blister rust even though he has planted considerable white pine, for wild ribes are practically unknown in this section. He found some infected pine right on the campus a few years ago, and congratulated himself that he had a live specimen to show his students. The following winter, however, a perfectly healthy tree was broken down by an ice storm and carried his infected tree with it.

The southern part of Tolland County has little native pine, so let us travel north through Willington to Union, which town has not only the smallest population of any town in the state but the largest percentage of forest land and the largest amount of merchantable white pine. Our forest survey of 1913 showed 80% of the town in forest, and our pine survey of 1920 found about 16 million board feet of white pine. That would not be much in northern New England, but for Connecticut of today it is a heavy stand. The white pine areas are increasing by natural re-

production and the future of the town appears to depend on their protection and proper management. Mt. Ochepetuck in the southwestern part of the town is used as a fire lookout point, and from it we can get an idea of the forested areas.

This hill to the northeast is in the Union State Forest, a tract of about 500 acres. Much of it was abandoned farm land on which white pine has been planted. Beyond is a large area owned by the American Optical Company of Southbridge, Mass. They hold about 5,000 acres in the town, and have planted a great deal of white pine. Although they are growing fruit on some of the land, most of it is held as a permanent forest investment, and consequently they did not hesitate to destroy seven acres of currant bushes in 1916 when blister rust was found on some of their pines which came from Germany. No secondary infections have been found and the disease is apparently under control, thanks to the absence of wild Ribes.

In the southwestern part of the town there is another holding of at least 5,000 acres, also being held as a forest investment, and with considerable plantings of white pine.

These three forest holdings constitute about two thirds of the forest land in the town. Organization for blister rust control would therefore be a comparatively easy matter, but so far nothing more than scouting for pine infections and Ribes has been deemed necessary.

One more stop before we hit Rhode Island again; this is the town of Pomfret where there is very little natural white pine, but considerable ornamental and some forest planting. In 1916 an infection was located in a plantation which appears to have been set out as early as 1900. A number of trees had been killed by the rust which may have been primary infections. A currant plantation in an adjoining garden furnished plenty of chance for the disease to spread, and seedlings from these currants were plentiful underneath the pines. It seems quite

probable that this was an original infection on imported stock although the source of the trees has never been determined.

The currant bushes in the adjoining garden were destroyed, and the escaped seedlings were eradicated. The plantation and the region around it, including several plantations of white pine within a mile, have been under close observation since 1916. A few secondary infections have been found outside the original center, but nothing to indicate any recent spread.

Some of the other towns of Windham County have more native white pine as well as forest plantations, but wild Ribes are very scarce. A few infected trees were found in plantations where German stock was used, but so far no secondary infections have been located outside of Pomfret. Mr. Herbert J. Miles, M. F., Harvard 1910, is now employed as Blister Rust Control agent in this region with headquarters at Putnam. Prior to July first he was an inspector in the gypsy moth control, and as yet is none too familiar with his new duties, but expects to get so he can spot a Ribes or a pine infection with the best of us.

Here we are again back in Rhode Island so I will turn you over to Anderson once more.

Another detour, Filler, we know you don't care how long or how rough the road is if it is only wide enough. This town of Glocester is the home of the State Forester, Mr. Jesse B. Mowry. Within the last twenty years nearly ten million board feet of white pine have been taken out of this town. There has been little provision made for natural reproduction. There is much need of practical forestry here. A few miles south of here are the towns of Coventry and West Greenwich, which have more pine than all the other towns in the state combined. A Mr. Arnold at Greene has set out over three million seedlings, mostly white pine. This past season he planted 105,000 white pine. While such practice is expensive to the

average farmer, there being no state nursery, it certainly is a quick method of placing waste land on a profitable basis. Many others have followed Mr. Arnold's example, though not as extensively.

Perry's new car seems to be rarin' to go but we should stop here in Greenville to see the largest spot infection in Rhode Island. It was caused by red currants too. These were eradicated in 1920. The lack of pine seedlings under the older trees is due to the blister rust affinity for young thrifty seedlings. Well, it is but a few miles from here to Providence. It was a fast trip. Is everything out of the cars? Hold on to Fivaz for a moment, Endersbee. That is only Detwiler getting his brief case.

We hope that you have all enjoyed the trip. We have done an enormous lot of talking, but then you know this was the former home of Dr. York.

So long, "Blister Rusters", come again.

BETTER PLANNING

The Ribes eradication work scheduled for this year in New Hampshire was 80% completed at the end of July. By the first of August it will be finished in nearly every district. Similar conditions exist in the Maine districts. This is a big departure from previous years when the work has often continued into October in an effort to clean up all that was secured. This year there has been more work than ever before with a correspondingly larger acreage protected. The change to earlier completion has been brought about mostly by better planning by the agents and partly because of an abundance of labor. The use of local labor has far exceeded that of former years, going as high as 75% in some districts. In a few towns, men of foreman or scout caliber have been developed and used in those positions. Relieved of the burden of the heavy rush eradication work, the agents are securing such additional private and town cooperation as they can finish in the remaining part of

the season. They also have more time now for educational work at the fairs which come principally during September.

Heretofore fair exhibits have been more or less experimental with agents in all states. It appears to be the consensus of opinion of the agents and state leaders that fair exhibits are valuable in an educational way, that both the large and small fairs should be utilized and that the larger fairs demand the more elaborate displays in order to compete favorably with exhibits placed along beside them. It was at first thought that the large fairs were no good for our educational work because people at some of these fairs took no interest in exhibits that were used there. It now appears that they were not dressed up enough. If a man goes to a formal ball he dresses in formal clothes because he wants the girls to dance with him. If he dresses in overalls the girls turn their heads and he gets no dances. If we display our best blister rust clothes we will get as many dances as the other fellows. If the overalls are the only dress to attract attention on the grounds then wear them, but make sure you have the best material and that it is the most attractive.

Those agents who have cleaned up their Ribes eradication work will now have ample time to "dress up" for the fairs. Better planning of one job has released time that can be devoted to better planning for the next job.

W. J. ENDERSBEE.

When Shall We Eradicate Ribes in a Mature Pine Stand;
Before or After Cutting the Timber?

Mr. Fivaz, commenting in a letter of June 27, 1924, on the eradication work on Senator Ferris' place at Eagle Lake, New York, made the following statement:

"On about three acres of that area, there is a recent slash, probably of the last two years, in which gooseberries and "skunks" have increased seriously due to the increased light. Eradication on such an area is increased easily 200 to 300% in cost over that on adjacent uncut land, and the efficiency of eradication is bound to be lower. This brings up the matter of

whether to eradicate before or after cutting. The state now recommends waiting until a year or two after cutting. This does not seem to be wise at least in many cases that I have seen."

Mr. Pierce, in a paper at the Boston Conference February 8-10, 1923 (p. 114 of the Proceedings), stated that,

"When the stand is to be opened up by thinnings or at the final cut, the area should be worked and all Ribes removed just before these operations. If Ribes were not removed they would recover quickly under better light conditions, and would become sufficiently large to menace the pine, especially the young seedlings."

Editor: A discussion in the News Letter of Ribes eradication before or after cutting with citation of actual facts would be of great value.

SOME OPINIONS ON THE GROWING OF WHITE PINES

(In letter from A. C. Cline, Instructor in Forestry at Harvard Forest, to O. C. Anderson of Rhode Island, dated July 29, 1924.)

"I am very glad to have had the opportunity to see the work you are doing in Rhode Island, and to get some new ideas concerning the growing of pine. In the following paragraphs, I have attempted to set down my present opinions briefly, on the growing of white pine in the Northwest."

There are some who would favor giving up entirely the growing of white pine in many parts of New England. To be sure, an untrained observer who has witnessed the destructive work of the blister rust, the white pine weevil, the pine needle blight, the Pales weevil, ants and aphids, and many other white pine pests and diseases may be excused for his pessimistic attitude. Some forest growers are looking around for another tree to plant in place of white pine, - a 100% tree free from all ailments: they would cast aside the old and take up the new. It is the old story of the "strawberry patch over the hill has the sweetest berries." It has even been suggested that white pine has degenerated, and many of the "old timers" will say "It don't grow like it used ter."

However, in spite of these tendencies to forsake the old stand-by, there are at least a few foresters, myself among them, who have not lost faith in it. I believe that the main question is not what to grow in place of white pine, but, rather, how to grow white pine properly.

Enormous changes have taken place in the Northeast since the white man first "threw a monkey wrench" into Nature's "machinery". For example, farm abandonment has brought about a great increase in pine acreage, and an even-aged form of pure pine on heavy soil, a type of stand unknown among virgin forest types; clear-cutting and fires have caused a great increase in weed species, so that now there are more weeds than crop trees. Conditions have been made favorable for a great increase in the amount of damage caused by insect pests and fungus diseases. Small wonder that white pine "don't grow like it used ter," except in the relatively few spots where it is growing as Nature intended it should.

The question now arises "How should white pine be grown?" To answer this it is necessary to consider a number of factors. At the present time blister rust is the critical factor in certain parts of the Northeast, while in other parts of the same region the white pine weevil is the critical factor. Since blister rust can be controlled at an unreasonable cost, there is no reason for abandoning the growing of white pine on this account alone, and in localities where pure pine is a permanent type, well adapted to the environment, and capable of being reproduced naturally, I would favor its continued growth in pure stands. In other localities where pure pine is not a permanent type, but where the critical factor is a controllable one, there may also be justification for establishing pure stands. However, pure even-aged white pine on the heavy soils (where pine once grew in mixtures) generally fails to maintain its health and vigor for more than 60 years. For long rotations pure, even-aged pine appears to be wholly unadapted. In many

localities the white pine weevil is the critical factor, and in such places I believe pure stands will be replaced by mixtures. To date no practical means of controlling the weevil in pure stands of pine (especially plantations) has been found. In badly weeviled young pine stands all hope of "quality" timber is futile. Although close spacing undoubtedly improves the quality, especially of the butt logs, the cost of planting 4' x 4', for example, is high. On heavy soil where there is severe hardwood competition during the period of crop establishment, the costs of growing pure pine amount still higher. After having observed second growth, even-aged mixtures of pine hardwood, pine-hemlock, and pine-spruce in weevil localities, I am convinced that high quality white pine can be grown in properly constituted mixtures in spite of the weevil. However, much more study is required before we shall be prepared to say just what mixture is the right one for the case at hand. Not only do such mixtures give promise of controlling many insect pests, and of producing high quality timber, but, furthermore, longer rotations, more vigorous growth (brought about by better soil protection, and the maintenance of its fertility), and an all-round safer investment seem to be concomitants of the mixed stand. It is even conceivable that a mixture might have a beneficial influence upon the spread of the blister rust: a protective screen of hardwood leaves might act as a barrier to the spores. As to the pine needle blight, another serious enemy of white pine in certain localities, I have yet to see a tree so affected when grown in a well-stocked mixed stand.

I believe that foresters engaged in blister rust control should always consider these matters when recommending to the public the establishment of new stands in which white pine is to be an element. Too much thought and study cannot be given to the constitution of new stands, for, once the trees are put into the ground, any error in judgment cannot be corrected for 50 to 60 years. Another crop will have "gone wrong."

LESSONS FROM AN INSPECTION TRIP

Through the Loblolly Pine Section of Eastern Maryland.
By the Alleghany Section of Society of American Foresters.
July 25-26, 1924.

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Attendance - About 50 foresters - federal, state and private - went on the trip which was conducted by members of the Maryland State Forester's Office.

Program - A two days program had been arranged, and the places visited were marked on a map of Maryland by numbers and the corresponding numbers were used in a mimeographed itinerary. Both map and itinerary were handed to each one in the party. Not only were the forestry operations and experiments described with supporting statistics, but interesting details concerning famous trees or rare specimens were noted.

Extracts from the program are here given:

"Stop 2-b

THINNINGS OF REIMER PROPERTIES

Release thinning in 25 year old loblolly pine stand made in 1918 which took out the deformed, overtopped and wolf trees.

Trees in this stand averaged about 50 feet in height and 452 to the acre. An average of 132 trees to the acre were removed, or over one quarter of the standing trees, amounting to 4 1/4 cords per acre.

Costs of thinning experiment, cord basis.

Cutting	\$1.48
Hauling (5 miles)	2.10
Loading on cars	.45
Total cost - - -	\$4.03

Sold at net profit of \$3.00 per cord in Brooklyn, N. Y.

In 1921 a measurement in thinned plot and unthinned check plot showed the following results.

	<u>Acre Basis</u>	
	<u>Thinned Plot</u>	<u>Unthinned</u>
No. Trees		
standing	320(all thrifty dominants)	514 (52 dead, 98 overtopped)
Yield	27 cords.	30 cords

* * * * *

"Stop 5-a

E. S. ADKINS & COMPANY

Pony band saw in operation, only one on peninsula. The Adkins Company figures that it is cheaper to haul logs (by team) 6 to 7 miles and get superior lumber which saw mill insures, than to use portable mill in the woods. Incidentally, the sawdust is furnished to local electric lighting plant for fuel in exchange for power for electrically driven machinery. The slabs find a ready local market for fuel wood.

* * * * *

Comments - Every automobile in the party was distinguished by a small U. S. flag attached at the left side of the machine, at the back. Identification of cars by flag or streamer is very important where there are many cars in the party. Not only was there a leader but there was a tail-ender who saw to it that all cars were kept in the party and did not get lost.

There was a noticeable lack of permanent demonstration sign boards. The areas examined were frequently on back-woods roads which are little used. If more demonstrations were along the main highroads, they would have had increased educational value, especially if properly advertised with signs as posters.

Arranging for such a comprehensive 2 days program necessitated a thorough knowledge of the country, accurate records concerning many woods properties, and follow-up studies of past experiments and past work.

Those demonstrations at which the owner was present were especially helpful and well received.

Lessons from the trip - It is desirable for the crowd to be gathered together around the leader at each demonstration before explaining the points to be seen at that place.

In planning a tour, it is usually necessary for the leader to make the trip in advance in the order of the program in order to figure on the time schedule.

There is need of mutual exchange of ideas at such a demonstration. This is only possible when the schedule is not too long or too completely filled. It is usually desirable to have some of the men in the audience ask questions or express their ideas regarding the practice which has been demonstrated. Often the leader can encourage discussion by asking questions of the audience.

Roy G. Pierce and George H. Collingwood,
Washington, D. C.

BLISTER RUST CONTROL WORK IN ESSEX CO., MASS.

The following clipping received from the "Newburyport, Mass., News" indicates that Mr. Roop is "travelling on high" in Essex County.

"Newburyport, July 9. William T. Roop, blister rust control agent, who, with a number of assistants, is working in Essex County in an effort to prevent the spread of the white pine blister rust, which is menacing pine trees, is now covering this city. He has headquarters at 130 High Street.

Mr. Roop states that the blister rust is attacking the trees at Atkinson Common and Moseley Woods and that it must not be allowed to spread. He is co-operating with the owners of farms and private estates to bring about the removal of all currant bushes, which, he claims, are responsible for the rust. Several years ago, many of the bushes were removed and Mr. Roop now declares that the process should be continued.

Considerable opposition to the destruction of the currant and gooseberry bushes has been encountered, but Mr. Roop says the opposition is disappearing and that there is a better spirit of co-operation. If the trees are to exist, the bushes must go and he believes that the beauty and the utility of the trees are far superior to the bushes and therefore the trees must be preserved.

Tree Warden Charles P. Kelly was with Mr. Roop yesterday as he was interviewing interested parties.

The control work in Rowley, Georgetown, and Newbury has already been finished by Mr. Roop and his men and after this city and Salisbury have been given attention, the field party will move to West Newbury, Merrimac, Haverhill, and North Andover."

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In June 1923 during graduation exercises of the Norwell, Mass. High School, one of the graduating students chose for his essay subject, the "White Pine Blister Rust and Its Control". Mr. and Mrs. Burdette were in attendance at the exercises and were most favorably impressed and returned home much concerned over the welfare of their white pines. One of the first things to be done the next morning was to uproot 36 big currant bushes. No jam and jelly came into the house from their bushes this year but their pines were saved.

E. M. Brockway, Mass.

"THE OWNER WANTS THE FACTS"

Recently a blister rust control agent received a request from a manufacturing plant (we will call it the Smith Company) asking for someone to inspect their pine stand as they feared it was infected. The agent who happened to be new in the district found on investigation that this property had been covered the previous year by a state scout and that as no Ribes were located on this land, the scout had not taken the time to report the conditions to the owner.

The scout did good work as far as eradication goes, but forgot some important things, namely that here was an opportunity to make friends for our work, also that as a taxpayer this firm had a right to know what he had found on their lands. The policy of giving each cooperator a report of the control work on his property is essential. It is also equally important to let owners like the Smith Company know of conditions on their lands even though no cooperation is required from them due to absence of Ribes. If you personally owned such land, you would want to know conditions, so does Smith. Also remember Smith has friends who can spread the blister rust gospel. Smith may be able to aid our work in many ways if you give him the chance.

E.C. Filler.

Here's a new one for you!

Scouting was being performed in one of the towns in Plymouth County. The Agent was with the State Scouts and stopped to call at a house. The conversation was something like this.

"How do you do Sir? Fine day isn't it? I suppose you are wondering what these men are doing in the woods over there and around the stonewalls on the roadside. They are working for Mr. Johnson up the street here in connection with the whitepine blister rust disease, and I am stopping here to tell - - -" "Wall young man, I want to tell you that I aint got no blisters on my house," interrupted the prospect.

E. M. Brockway, Plymouth Co. Mass.

SPEAKING OF TAXES !

The old gentleman had many infected pines on his property but he was not inclined to believe that the gooseberry bushes near by had anything to do with the dead and dying trees. After giving him a little talk on blister rust, the suggestion was made that he could have the services of a State inspector who would help him with the eradication work. Then came the sharp reply, "I want you to understand that I do not need any young State inspector to tell me what to do or how to do it; these State men never did any work anyway." "Well, Mr. perhaps the inspector does not know how to hoe potatoes but he does know how to find and uproot currant and gooseberry bushes. If you think this fellow does not work, then why not try him out for a day." The reply came again, "I don't want him around." Now Mr. perhaps you do not believe those bushes killed your pine trees but several of your neighbors have visited this same spot and they believe it and they are going to eradicate all currant and gooseberry bushes on their farms. Of course it does not make any difference to me whether you eradicate or not, but I thought that since your taxes helped to pay the salary of the State man who is now helping your neighbors, that you would welcome a chance to get some return for yourself." Another crisp reply, "You send that young fellow up here and I will make him work, you just bet I will." We have not reached his place with eradication work as yet but the report comes in that the old gentleman and his son have already started to do their own eradication work and we will check up on the work later.

In Franklin County, Mass. they come hard but the harder they come, the better we like 'em. In Northfield, Mass, the gooseberries are so persistent that they grow through bricks. A Ribes root, three-sixteenths of an inch in diameter was found growing completely through a red building brick four inches thick.

Ribes eradication work progresses regardless of the fact that we have had two deaf men in one crew and a man with but one arm in the other. Can anyone beat that!

G. S. Doore, Franklin County, Mass.

BOY SCOUTS MAKE GOOD RIBES HOUNDS

Advance scouting was in progress in the town of Westfield and the State Inspector had found an abundance of wild blacks along the banks of a small stream. Upon interviewing the owner and bringing him to the area to show him the Ribes, he became greatly disturbed. He wished to have them eradicated but help was scarce and everybody was busy planting tobacco.

As the Ribes were nearby a main highway, I conceived the idea of "pulling off" a demonstration and accomplish a double purpose.

To this end I suggested Boy Scouts, the owner to furnish the refreshments for his part and the Boy Scouts to learn about the eradication of Ribes for their part. Everybody agreed and with an on-looking reporter the Boy Scouts took to the proposition like ducks to water.

They worked like beavers uprooting the Ribes. At noontime all enjoyed a swim followed by lunch which consisted of an abundant supply of hot-dogs, sandwiches, bananas, oranges, ice cream, and cold tonics. At four the work was completed and the boys left, tired but not needing any supper owing to a final consumption of "eats" left from lunch at noon.

The total casualties of the day amounted to 3561 Blacks and 149 Gooseberries, the Ribes ranging in size from seedlings to six feet, more or less.

There were six Scouts in the outfit and the bill for the food consumed amounted to \$6.00, the cost of eradication to the owner. The boys gained the experience and since then, three of the Scouts have been employed as regular crew men. They are willing to work for moderate pay and the average farmer is glad to employ them for eradication work.

R. E. Wheeler, Hampden Co. Mass.

THE PITCH PINE BLISTER RUSTS.

In view of recent developments with the sweet-fern pitch-pine blister rust it seems desirable to call the attention of the blister rust control men to the two pitch pine blister rusts which are found in the eastern states. The one above mentioned as indicated by its name attacks pitch pines and the shrub known as sweet fern. The other blister rust attacks pitch pines and a semi-herbaceous plant known as Comandra. The first mentioned rust is perhaps the most abundant

and widespread, but the two are liable to occur together, when we are liable to get an especially severe outbreak of the disease upon the pitch pines.

In establishing new nurseries one should be very careful not to have the alternate hosts of any of the blister rusts within a quarter mile of the nursery plot if possible. The loss with certain very susceptible species of the pines may reach nearly 100 percent where the conditions are very favorable for the disease. Specimens of blister rust on any of the pitch pines (those with needles in twos and threes), and on the sweet fern and Comandra, are desired by the writer. A slip of paper with the name of the plant affected, place collected, and date of collection, together with name and address of sender should be put with each specimen. The sending in of such specimens will make more complete the paper that is in preparation for publication next fall or winter.

Perley Spaulding, Bur. of Plant Ind. Wash. D.C.

BLISTER RUST AS SEEN IN RECENT EXAMINATION PAPERS.

(The gift of knowledge is sometimes a dangerous weapon-judge for yourself)

E.C. Filler

Question:- I have a ten acre lot of pine surrounded by dense brush, Ribes are abundant in the pine and in the brush. What shall I do to protect the pine from blister rust?

Answer:- The Ribes should be cut out of the trees and the brush cut or pulled.

Another Answer:- Destroy everything that is infected also white pine. There is no cure for young white pine.

Question:- How can you distinguish white pine from other pines?

Answer:- White pine can be distinguished from pines of other species because it shows off more. Many people have white pine on their estates for its grandeur.

Question:- List the points you would mention to a pine owner in order to get his cooperation in eradicating Ribes from his pine stand.

Answer:- I Should Show the Pine Owner his Fexins on His Pine and Show Him the Robie Currant and Gooseberry.

Answers to Other Questions

During the month of May and June the orange blisters swell out in a fungus like manner girdling a limb or branch.

To control blister rust first remove all carrying agents from vicinity of the tree trunks and roots, second, treat with such solution and sprays as will destroy the parasite.

Here's another from a lad hot from college-

Cronartium ribicola Fischer, commonly called the white pine blister rust is a parasitic heteroecious fungus of the family melamporeaceae, order uredinales, class, Basidiomycetes. The imperfect stage on *Pinus* was originally called *Peridermium strobil*, etc. I am familiar with the flora of New England, both Phanerogamic and Cryptogamic.

Note: At this point the examiner had to go for a drink.

WISCONSIN'S SHRUB AND TREE TRANSPORTATION ACT.

Under a cooperative arrangement with the State Conservation Commission, the conservation and game wardens of Wisconsin are deputized by the State Department of Agriculture to assist the State Entomologist in preventing general violations of the nursery inspection law. Like most states, the Wisconsin statute prohibits the transporting of uninspected trees and shrubs for propagation. The transporting of material of this kind for long distances did not often occur until about 1922, when tourist traffic increased enormously.

During the summer of 1923 the wardens and nursery inspectors intercepted 657 autos carrying trees and shrubs. Detailed reports were made on 57 of these cases. It was found that 39 of these were destined for points within the state, and 18 for points outside the state. Fourteen of the autos were carrying white pine, coming either from the blister rust infected areas, or adjacent sections of the state. The wardens are given no authority to inspect but arrange either for the destruction of the plant material or its shipment to the state entomologist's office for inspection.

Posters advising tourists of the regulations are put up in various public camp grounds.

S. B. Fracker, State Entomologist

Extracts from the News Letter of the New Hampshire Forestry Department
for July, 1924.

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State Leader L. E. Newman reports that White Pine Blister Rust Control work has been progressing very favorably during the past few weeks. The destruction of currant and gooseberry bushes has been completed, for this year, in 31 towns and crews are employed in 36 others. Nearly 1,000,000 bushes have been located and destroyed.

That this work is necessary is indicated by the fact that diseased pines have been found in all of these towns in great abundance. Notable among the larger outbreaks are areas in the towns of Chinchester, Weare, Hampton Falls, Tuftonboro, Pittsfield, Belmont, Sanbornton, Albany and Hanover. The Rust is such a common thing in many other communities that space does not permit mentioning them all.

Mr. C. R. Tillotson of the U. S. Forest Service spent a day with us recently viewing some of the badly infected pine areas in Littleton and Lisbon. Mr. Tillotson was quite surprised to see what a large amount of damage Blister Rust had done in this section. We also visited the crew at work on Sugar Hill so our guest could learn something of control methods.

We have heard considerable comment regarding grateful people and in our young life have met up with a great many, but the party who heads the list in that category is living at present in Monroe. What do you think of a farmer who will give over two hundred cultivated currant bushes without batting an eyelash? This was the experience we came in contact with the past week and rest assured the writer felt very much relieved when the old fellow said, "Take them if they are going to kill the pines." (Editorial Note: Tom Kane may well be grateful in this case. His own eyelashes might have been batted for suggesting such a sacrifice to the generous Monroe gentleman.)

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BACKING FROM THE OFFICE.

"Yes, I believe you, but there are so many flim flam games on, I would like to see something in black and white", so spoke a native son of New England to the local blister rust control agent. As an agent, you have doubtless had many similar cases. In other words, the pine owner is not quite ready to cooperate after the first interview. Here is where your state office could be of great assistance to you. Suppose you said finally, to the owner, "Mr. Smith, I would like to have you think this matter over and in the meantime I will ask our office to send you some publications on the disease." You then send the name of the prospect to the state office. Here, they have standard form letters for just such occasions.

A few days later Mr. Smith gets blister rust publications and a letter from the state office saying: "Our blister rust control agent, Mr. Fred Brown, who recently interviewed you regarding cooperation in blister rust control work, etc. The letter is signed by the state leader or state cooperator and the typist has been careful to insert the names of the agent and prospect with the same colored ribbon as used in the form letter, so that the prospect thinks this is a personal letter to him. He feels rather pleased with such personal attention, is made to realize that the agent is simply the representative of a large organization in which he must have confidence, also he appreciates the state office is behind the project as well as the U. S. Department of Agriculture. The office immediately notifies the agent the date such a letter was sent, and a few days later the agent makes a second call on his prospect. This time he will probably find his words creating the desired action. In some cases, it may be desirable to circularize the prospect more than once.

Sales houses have found this procedure pays. It ought to pay even in our line of work. I suggest you discuss this idea with your state leader.

E. C. Filler - 7/30/24.

REPORT ON WESTERN BLISTER RUST WORK

July 1 to July 30, 1924.

1. Cultivated black currant eradication.

Montana: Johnson reports Beaverhead and Madison counties, and the towns of Whitehall and Boulder in Jefferson County completed. Locations and eradications have been made as follows:

County	Locations		Eradications	
	: Plantings:	Plants	: Plantings:	Plants
Beaverhead	: 4	: 23	: 3	: 21
	:	:	:	:
Madison	: 11	: 19	: 10	: 18
	:	:	:	:
Jefferson	: 3	: 158	: 1	: 25
	:	:	:	:
Total	18	200	14	64

The following quotation from Hohnson's report will be of interest:

"This is chiefly cattle and sheep county. Fruit is entirely lacking. Many attempts have been made to grow black currants but without avail. Red currants are quite common, but it appears that the cultivated blacks winter kill. I have seen only one planting this summer which will bear fruit."

Idaho: Dr. Schmits reports Custer, Valley, Lemhi, Washington, Adams, Gem, and Idaho counties as completed in July, and Lewis and NezPerce counties, covered in 1923, as rechecked. All plantings found have been eradicated.

County	:Plantings:	Plants
Custer	: 0	: 0
Valley	: 2	: 2
Lemhi	: 4	: 21
Washington	: 5	: 20
Adams	: 1	: 4
Gem	: 2	: 28
Idaho	: 19	: 72
Lewis(recheck)	: 1	: 1
NezPerce(recheck)	: 1	: 1
Total	35	149

Washington: Bartow reports eradication nearly complete in Asotin, Columbia and Garfield counties. All plantings located have been eradicated. 17 cultivated black currant plants and 32 cultivated black currant bushes have been located and eradicated.

Oregon: Goodding reports Marion and Linn counties as complete, and his crews starting work in Benton County.

County	:Plantings Eradicated:	Plants Eradicated
Marion:	84	1069
Linn :	14	66
Total	98	1135

All cultivated black currant eradication men report excellent results from the use of the blister rust motion picture film. This film has been shown 18 times in the course of the cultivated black currant eradication work in the several states, and has always been of great assistance in informing the general public concerning the purpose of this work.

2. Local Control.

On July 1, 48 crew men reported for duty, and were sent to the field in Upper Priest River Valley, for Ribes eradication. 7 crews are now engaged in actual eradication and 1 crew in experimental work on methods. Due to the

fact that the first part of the month was devoted to training these men, no applicable cost figures are as yet available. The eradication and reconnaissance work have both been considerably hampered by the serious forest fire situation which has existed in northern Idaho during the past month. In July, 96 man-days were spent by the blister rust employees on this project in fighting fire.

Ecological study: for the major portion of the present season, the ecological work is being confined to a study of Ribes and white pine growth of various ages, in the Upper Priest River Valley. During July, 6 plots were laid out on burns of different ages, from 5 to 60 years, and the vegetation on these plots carefully recorded. The final significance of these records can only be determined at the end of the season, when the data is carefully worked out and studied.

Chemical eradication: during the present season it is planned to lay out a number of plots, and apply a number of different chemicals, by several means of application, to the Ribes present. The preliminary work has now been completed. The plots will be laid out in the vicinity of Wallace, Idaho, on the headwaters of Placer Creek, an area recommended by Mr. C. K. McHarg, Supervisor of the Coeur d'Alene Forest. R. lacustre, R. petiolare occur in profusion on this area. Three methods of application are being tried, depending upon the chemical and the growth conditions: (1) soil injection, (2) soil surface application, (3) spray. As a preliminary to application on the plots, the following substances have been applied to a few bushes, to get an index to their relative toxicity:

<u>Chemical</u>	<u>Method of Application</u>
CaCl ₂	soil injection, surface, spray,
Ca(OH) ₂	soil surface
"Carco" (coal tar product)	spray.
NaHSO ₄	soil injection, surface.
CS ₂	soil injection.
MgSO ₄	soil injection.
Ca(CN) ₂	soil injection.
FeSO ₄	spray
ZnSO ₄	soil injection, spray.
MnSO ₄	soil injection.
K ₄ Fe(CN) ₆	soil injection.
KCN	soil injection, spray.
Paris Green	Spray.

(Signed) Stephen M. Wyckoff.

(BLISTER RUST IN A SERMONETTE - From the Cincinnati Post, 8/6/24.)
Edit. Note last paragraphs in following article.

THE GUIDE POST

By Henry and Tertius Van Dyke.

HATRED OF EVIL.

O ye that love the Lord, hate evil. - Psalm 97:10.

Every emotion of man has its service to perform in the conduct of life.

Most of our difficulties come from the misuse or abuse of what, in its right use, is good.

The terrible revulsions of hatred, with their destructive strength, have their place.

They are the natural complement of the love of that which is high and lovely and pure.

The lover of God must hate evil as He hates it.

And that means we must hate it with an annihilating hatred. Most of us are content to grieve over it and cry, "Alas, alas!"

This will never do.

We must not be satisfied to escape the direct clutches of evil.

We must launch against it a campaign of extermination.

And that calls for all the resourcefulness at our command in ourselves and in God.

For evil is deceptive beyond anything in the world.

Attack it in one place and it slips away into another place, leaving the stupid reformer hammering at the door of an empty house.

Do you remember the scourges of white pine blister rust that destroyed so many trees?

Little could be accomplished by trying to save each sick tree.

Only when men's sorrow at that destruction advanced to the disciplined hatred that traced the propagation of the pines' disease to the currant and gooseberry bushes, and set an army of men to root them out - only then was it effective.

So must it be with evil in ourselves and in others.

As you love God, hate it till it is dead.

(Copyright, 1924.)

E X H I B I T S

The following ideas have been developed for use in Warren County, New York, exhibits, but you can convert them to your use.

YOU HAVE HEARD
YOU HAVE READ
BUT HAVE YOU SEEN
WHITE PINE
BLISTER RUST ?

This can be used as a main sign for an exhibit, especially where "blister rust" is a byword yet the owners are unconvinced.

DEAD !

This tree might have produced 500 board feet of white pine lumber.
It would then have been worth, on the stump, five dollars of any man's money.
It might have been protected from Blister Rust at a cost of less than one cent.
- BUT THE CENT WAS NOT INVESTED -
This tree was killed by Blister Rust before reaching commercial size.
The owner saved the cent but lost five dollars.
He paid taxes on the land on which it grew - these too he lost when this tree died.

PROTECTION PAYS !

This sign will work fine on any dead (B.R. killed) tree in your exhibit.

HISTORY

THIS IS HISTORY -

This white pine tree was born in (1882).
It grew with many others in a pine lot on (Kelm Mountain, Warrensburgh).
It was attacked by Blister Rust in (1912).
It was killed by Blister Rust in (1923).
It is one of the (97 out of every 100 trees) on that lot which are diseased with the Blister Rust.

WE WILL BE GLAD TO ARRANGE TO SHOW YOU THAT LOT.

IS THIS HISTORY REPEATING ITSELF ON YOUR PINE LOT ?

Another one for a dead tree - from the infection area studied in your district. Change the facts and figures accordingly.

W H I T E P I N E

IN W A R R E N C O U N T Y

- - - * - - -

Is the best paying crop for poor soils
Will grow where the plow cannot go
Pays a large share of the taxes
Furnishes lumber without freight charges
Stabilizes local industry
Furnishes employment during the winter
Attracts summer people
Helps to keep the hunting and fishing good
Prevents erosion of hillsides and blowing sand
Will continue to grow rapidly -

IF PROTECTED FROM FIRE, INSECTS, AND DISEASE

ITS PROTECTION IS A MATTER AFFECTING NOT ONLY OWNER,
MERCHANT, BANKER, AND LUMBERMAN -

B U T A L L G O O D C I T I Z E N S

Isn't white pine all this in YOUR County? Are you telling anyone about it? Lots better to let them read it - use this 8 by 10 inches or 8 by 10 feet - it is worth while. Have you a permanent location for a big one in the county seat, out-of-doors, say in the square? Try it on oilcloth, backed with board - make a professional looking job of it that can be read a block away. If the city fathers turn you down, try that grocery store that is all wall and no windows on one side.

THIS IS 13 FOOT SECTION OF A WHITE PINE TREE.
IT WOULD HAVE GROWN TO THE SIZE OF ONE MARKET
IN ABOUT 50 YEARS - -

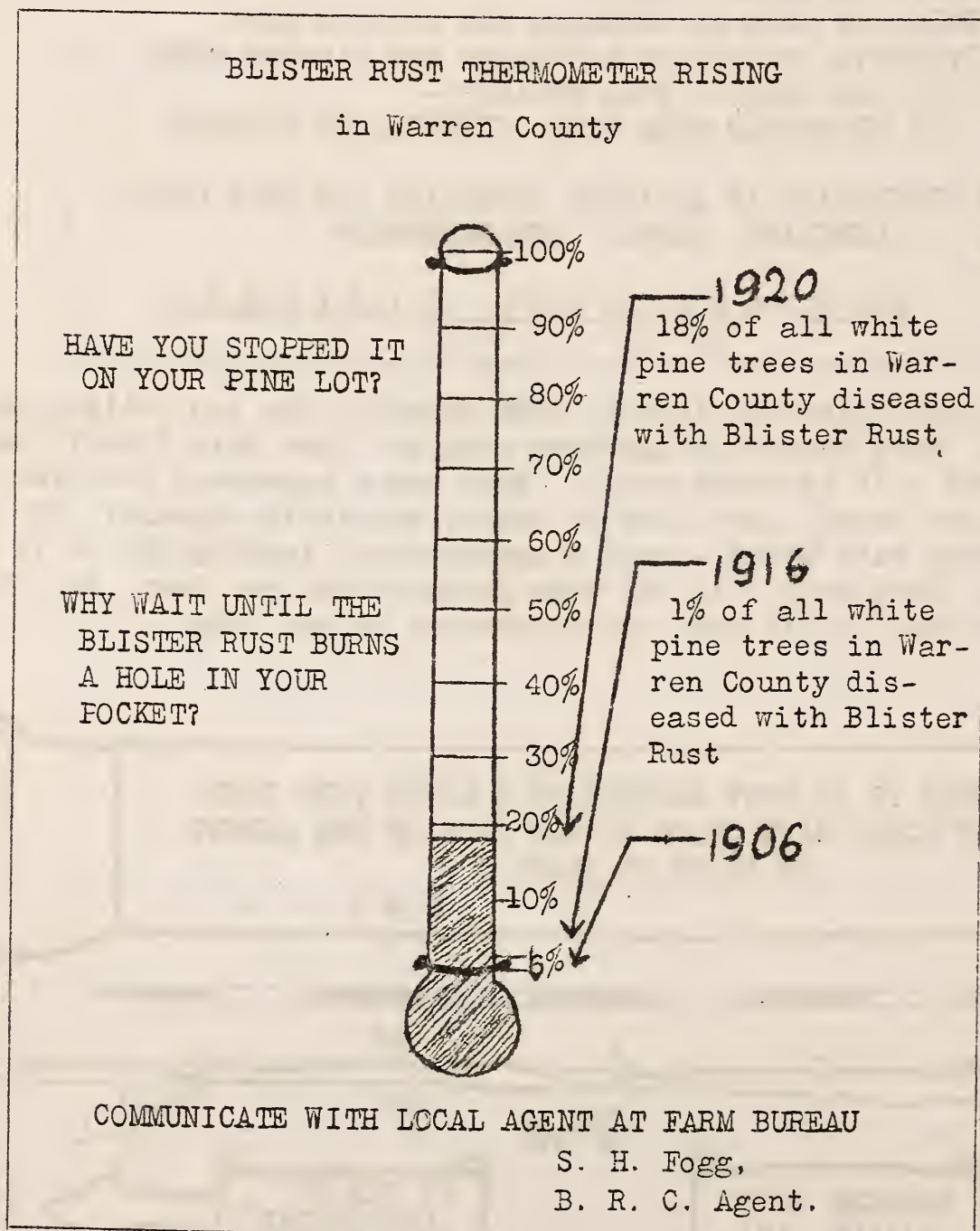
B U T - - -

BLISTER RUST
KILLED IT!

IT CAN BE
CONTROLLED
HELP YOURSELF

Here is a whole exhibit - no attendant needed, better without one. A Blister-Rust-killed tree over 13 feet high, but cut so that a 13 foot middle section remains. Mount on two posts; above it set a 13 foot pole

with red and white foot markings, and above that, stretch a banner. Better wording can be developed - if the 16 foot log is standard in your neck of the woods, then use that, the same procedure applies also to the unit of measure in your section. Trim off or crop off enough branches to exhibit entire length of trunk. Use beaverboard on posts for the lower signs and arrows, latter should be red, and oilcloth or canvas for the banner. Be sure that the exhibit includes a waterproof box full of literature and perhaps a book for names and addresses- all properly labeled. Set this exhibit up that week that you have two fairs- or crews to move- or something else to do, and it will bring home the bacon.

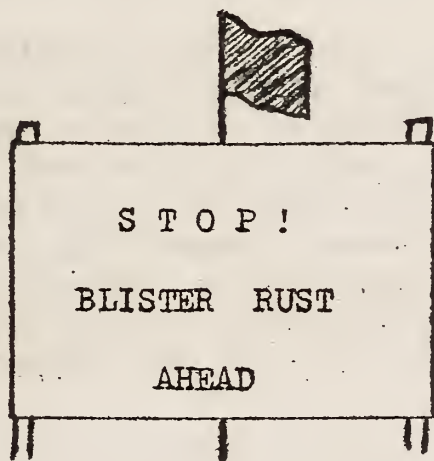


What does it register in your district or in your county? -
Or in that infection area you helped study awhile back? Are you getting those figures across to the public?

EXTENSIVE ROADSIDE DEMONSTRATIONS.

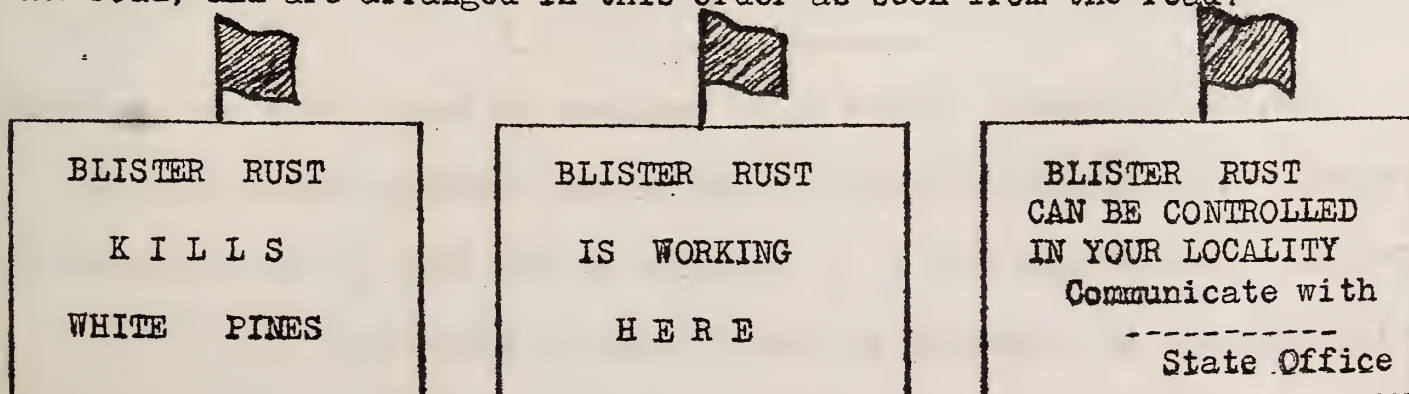
The Blister Rust Control Roadside Demonstration is an extension method which has been in use for slightly over a year - a year which has shown many worthwhile results traceable directly to these demonstrations. The one established last fall on the New York-Montreal highway, near Pottersville, N. Y., because of its extensiveness and position, has attracted widespread attention. There is no reason why many other infection areas on main roads cannot be made as productive of results as this one. A similar demonstration has recently been set up near Waterford, Vermont, on the St. Johnsbury-Littleton state highway, and several others are being planned. The work of every Agent who has an infection area adjacent to a main highway would profit materially from the establishment of at least one extensive roadside demonstration in the district. These demonstrations have been prepared and placed by the Agent with the aid of the Specialist in the district, and I feel sure that all Agents will find the Specialist in their state ready to assist them in this work.

Five large signs were used for each area. These are carefully lettered in red and black enamel on white oilcloth, either 2 by 3 feet or 3 by 4 feet in size, the larger being preferable whenever possible. Each sign is tacked on a solid board backing, framed with lath, and nailed in place on two solid posts. A black flag flying a short distance immediately over the middle of the sign makes it more distinctive and therefore more attractive of attention. Two of the five are used as advance signs, and bear the legend:-



These are installed on the road right-of-way, perpendicular to the highway at a conspicuous place some 100 or more feet from the infection area, one sign on each approach to the area.

The other three are lined up parallel to the road, between the road and the area, or just within the area so as to be easily read from the road, and are arranged in this order as seen from the road:-



The three are spaced about 50 feet apart- but this will vary with the length of the infection area adjoining the road.

Two or more "Save The Pines" posters, on board backing and nailed to posts, are useful in furnishing all the details to those that stop. Two or more large "Blister Rust Demonstration Here" signs are also useful, as they explain the meaning of the yellow and the white tags on the trees and the Ribes. The tagging must be intensive in order to show up. Yellow tags of two kinds, bearing the legends "Blister Rust Killed This Tree" and "Blister Rust Is Killing This Tree" are tied to dead and diseased trees, respectively, in conspicuous places, usually well up on the branch tips, at or above the greatest diameter or buldge of the crown. Every tree so tagged is then furnished with white tags stating "Blister Rust Is Working Here", and tied only on the canker itself. Often branches have to be cleared away to properly expose the cankers and white tags. Ribes, if they have not been eradicated, also bear a special yellow tag linking them with the presence of the disease on the area.

The area is usually made more presentable and striking if the hardwoods, brush, and bushes are removed and the weeds and grass mowed. It is of course necessary to get the owner's permission, as well as to consult the highway department concerning the legality of placing the signs on the right-of-way. These demonstrations are substantially built, and will withstand several winters, judging from the present perfect condition of the Pottersville demonstration, now about a year old.

The cost of materials varies with the size of the signs, for the 2 by 3 feet, all purchased materials cost about \$5.75, and for the 3 by 4 feet, about \$8.90. About 40 man hours were required for the making and installing of the signs for one area, exclusive of the tagging and brushing of the area. The total cost, including material, labor, and transportation of men will average around \$50. to \$60. per demonstration. This includes Agent's and Specialist's time and expense. All three Specialists have more detailed information on materials, costs, lettering, methods, etc., get in touch with them for further information and assistance.

A E. Fivaz

P E R S O N A L

Mr. H. E. Rounds, former B. R. employee in Connecticut and now Forest Inspector with the Penn. Railroad, took in the Forestry Tour in Eastern Maryland. Rounds says that F. F. Franklin of New York is now stationed at Louisville, Ky. as Inspector of Forest Products also with P. R. R.

District of Columbia.

Mr. E. R. Ford has left Washington on an extensive trip through New England and New York to be gone during August and September.

Mr. S. B. Detwiler has completely recovered his health and is now on a field trip in the North Eastern States.

Miss Irene B. Harmon appointed as clerk effective 7/29/24.

Miss Virginia Sargent resigned as clerk effective 7/31/24.

Maine.

Agent Kimball of Maine was recently refused the use of a rural postoffice for posting educational material consisting of maps and colored posters. Since that time permission has been given by the Postmaster General to post such educational material, provided the posters etc. carry the notation, "displayed by authority of the Postmaster General!" State Leaders are being supplied with rubber stamps to be used by their agents in preparing such exhibits.

Agent Sol Conner of Portland, Maine is further perfecting himself in practical psychology by taking a week's course from an eminent psychologist. Sol has enlisted Scout Hutchinson to his cause and the two of them will shortly be prepared to analyze the bumps on the heads of the local Silas Hardnuts.

New York.

Mr. Thurston L. Corbett appointed as Field Assistant, hdqrs. Albany, effective 7/25/24.

Rhode Island.

Messrs. Byron Carr, Clarence S. Carr, Irving S. Simpson, Ernest P. Matteson and Chas. A. Wilcox appointed as Field Assistants effective 7/1/24.

Vermont.

Robert M. Ross appointed as Collaborator, Montpelier.

Washington.

Wayne F. Painter, Johnny O. Loseth and Rolfe P. Lungreen appointed as Field Assistants, effective 7/1/24.

Miscellaneous Notes.

Junior Forester Wallace D. Black, in charge of the field work of blister rust control on the White Mountain National Forest reports that 5,000 acres have been cleared of Ribes on the forest this season. The average cost per acre was 16¢. An estimated area of over 3,500 acres of pine was covered with a stand estimated at 15 million board feet of timber. Figuring the value of this pine at \$10.00 per M on the stump it makes a total value of \$150,000.00. The cost to protect it was \$784.00 or about half a cent for every dollar of value. One half on one percent on the dollar is extremely cheap protection. It will be a big factor as an argument for use of the agents in that vicinity in securing cooperation.

- - - - -
"BELIEVE IT OR NOT"

That white pine is of prime importance to the dairy farmer of to-day. Why? The milk check does not meet the grain bill. Measurements taken on many stands of young pine show an average growth in height of four feet in three years.

That to a market gardener who owns pine, timber is of secondary importance. Cauliflower yields \$500 per acre. But the pine will help put John through college, just the same.

That timber is the only crop produced on the farm that the farmer ever sold or ever will sell. Some one bought his other crops at their own price, or told him what he could do with some of them. Homely but apparently true. As an argument, it takes the wind out of Hardnut's sails and makes him see the light of day.

That a Massachusetts man planted 2000 white pine seedlings in a day.

That a 1000 acre lot of pine in Greenwich, Mass. yielded a net return of 8% on the investment over a period of 40 years.

That the humorous side of eradication work is when you call upon a Judge to remove his cultivated Ribes for him and he shakes his finger at you and says, "Proceed under the statute young man". You laugh at him and he holds you in contempt of court and then realizes that he is out in his garden.

That getting four cooperators by finding a lost Polish child is the latest wrinkle in this district. The difficulty is they don't get lost often enough.

That the Town Radical who boasts that he will not eradicate, and then does, and won't admit it, is the man who knows a lot but cannot think of it.

That a Tree Warden sold Ribes for a Nursery. The blister rust men pulled them up. The Warden does not have to go home to friend wife now to get a "balling Out". Neither does the Agent!

That the harder you work a pine owner, the more favorable the publicity.

Edw. J. McNerney, Worcester County, Mass.

Mr. and Mrs. J. H. Lincoln of Norwell, Mass. were residing in the town of Cohasset, Mass. in 1922 and read with much interest the first blister rust article that appeared in the Plymouth County Farmer- the monthly publication of the County Extension Service- at the beginning of the control campaign in 1922. They were very favorably impressed; and this spring when the Agent started his work in Norwell he found that they had pulled up a patch of 900 thrifty currant bushes for the protection of their neighbors' vines. What you might call a volunteer advance agent!

E. M. Brockway, Plymouth Co. Mass.

Q U A R A N T I N E N O T E S

CONFERENCE ON BLISTER RUST QUARANTINE.

The Federal Horticultural Board, United States Department of Agriculture, has recently been requested by the American Association of Nurserymen to consider revision of Federal Plant Quarantine 26. This quarantine regulates the movement of currants, gooseberries, and five-leafed pines (host plants of white pine blister rust) from States east of the Great Plains to Western States, It also prohibits the movement of cultivated black currants and five-leafed (white) pines from New England into New York, and from New York and New England into any other State.

This quarantine was established in 1917 and many changes in the blister rust situation have taken place since that time. In view of this fact, the board has granted the request and announces that the conference will be held in their offices in the United States Department of Agriculture, Washington, D. C. at 10 a. m., September 26, 1924.

Any one interested in this matter is invited to attend the conference. Each State in which white pines are important as timber and ornamental trees deserves to have a representative at this conference or to send a written statement expressing their attitude toward continuance of the quarantine in its present form. It is expected that the nursery interests will be well represented, and it is equally desirable that pine growers, forestry associations, etc., should also present their views.

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O F F I C I A L O R D E R S

Memorandum Concerning
Freight and Express Shipments
to the Washington Office

Gentlemen:

The Bureau experiences a great deal of difficulty in connection with incoming shipments, in that they are addressed to an individual rather than to the Bureau of Plant Industry, Department of Agriculture, with the name of the individual added. When they come addressed to the individual, the freight and express companies almost always send the notice to the individual instead of to the Department, with consequent delay and often storage charges. These charges cannot be paid by the Department, and as a result further delay ensues before material is delivered.

It will be very helpful to all concerned if particular care will be taken in instructing shippers specifically to address incoming packages to the Department, adding the name of the individual. The following is given as a suggestion:

"Department of Agriculture,
Bureau of Plant Industry,
John Smith,
Washington, D. C.".

If care is taken to follow the above suggestion, it will result in speeding up deliveries and avoiding irritating and unnecessary delays.

Very sincerely,

(Signed) Wm. A. Taylor.
Chief of Bureau.



BLISTER RUST NEWS



SEP 15 1924

U.S. DEPARTMENT of AGRICULTURE
Office of Blister Rust Control.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry
Washington, D. C.

THE BLISTER RUST NEWS

Issued by the Office of Blister Rust Control,
and the Cooperating States.

EXHIBITS NUMBER

Vol. 8, No. 7.

September 15, 1924.

"Hello Agent!"

"Your just the fellow I want to see, glad you have come in to the exhibit. Lots of interesting things and people to see from these reserved places here.

"See that chap over yonder, looking things over, watching everything from the expression on the face of that fat man near the over-stuffed furniture display to the way that woman is taking in the metal-polish-fakir's salestalk. That guy never does any broadcasting, he's just a tally-sheet of human reactions. Be careful what you think about while you are here, I wouldn't be surprised if he is somewhat of a mind reader too.

"Another friend of mine, by the way, was just in here. Peculiar chap, bobs in and out at all times, but usually brings in something worth while, ideas, mostly. Cant always depend on his showing up when I want him, but I have hopes of getting him into better habits someday.

"Why do they hang around my exhibit so much? In the first place, Agent, those fellows are not just hanging around, they are working; and secondly, they are working for me. I see by your question that you don't recognize them from my description; the first is Observation, the other, Inspiration. I find them both very useful, especially with these here exhibits. Undoubtedly you've got them working for you too- don't let them just 'hang around'.

"This business of exhibits, Agent, is a big one. Why, a whole Office of the Department of Agriculture, and a large and important one too, is given over to it. A great deal has been written about exhibits, but a lot more hasn't even been discovered. The field of educational exhibiting is perhaps less developed than the others, for reasons of no importance here. The fact remains that we have a lot to learn about Blister Rust Control exhibits.

"It will pay us to look upon every exhibit we put on as an experiment, the data on which must be summarized and written up for the common good. This issue of the News is a good starter- but let's make the Exhibit Section stand out in every number as a barometer of our progress in that art. Remember, Old Timer, no exhibit is a total success unless the reasons why are made available to guide others- and no exhibit a total failure when others may profit from the experience gained from it.

"Well, Liz, you old wreck, let's head towards the next district before dark. Good luck, Agent!

Yours to the last root,

Riley Bill

EXHIBITING AT LARGE FAIRS

During the four winters 1919-1923 the Connecticut Agricultural Experiment Station exhibited at the Connecticut Agricultural and Industrial Exposition at Hartford. The Station was allotted a space 20' x 64' which it divided up usually according to subjects such as Chemistry, Forestry, Spraying, Mosquito Control, Blister Rust Control, etc.

At these expositions the various State Departments exhibited their activities and many industries and business houses showed their products and wares. Of necessity the booths varied greatly and offered a good chance to observe what attracted the most attention. No sales concession or games of chance were allowed during the show and this feature so often present at fairs was therefore eliminated. The psychology of the crowds attending fairs may be rather briefly stated-- about 90% of the people wish to be amused, the others come to learn. The exhibitor's problem is to reach the 90%.

Exhibits may be divided into two classes.

- a. Those with action.
- b. Those without action.

The former need no comment here. They get the crowds. The problem is to draw the crowds from them and to do this competitors must resort to features that are striking or attractive or both.

Obviously the Experiment Station comes in the class of not showing action especially at a winter fair. Despite this fact the Station exhibit has usually drawn attention. The apparent reason for this is that it has been attractive. This has been brought about by using considerable care

in the decorations and arrangement of subject matter to give it balance. As a matter of fact the exhibit is set up at least once before it is taken to Hartford.

After attracting people to look at an exhibit the next problem is to get them to look at the various features. Generally, a feature should be simple and striking. Black and white signs should be avoided unless used with something in color. Diagrams and charts are usually passed by unless used with pictures.

Blister Rust has been featured by itself at these exhibits. The plan is usually to provide a background of young white pine trees and branches in front of which are placed the picture charts and hand specimens. Attractive photographs of mature pine either as a part of the charts or mounted separately are drawing cards. Possibly the best specimen ever used was a live pine showing an aecial blister. The tree was collected in November and the aecia developed while the tree was in the greenhouse. A chart with pictures demonstrating the increased production of pine over hardwoods with the values in red ink also helps out. Technical terms should be avoided as far as possible.

H. W. Hicock, Conn.

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GONE BUT NOT FORGOTTEN

The famous South Deerfield, N. H. blister rust infection area is no more. Mr. Endersbee recently visited the area and found that practically the entire stand had been cut and sawed into lumber. Prior to the discovery of the Waterford, Vermont, infection area, this plot was considered the most striking example of blister rust damage to large pine. Many "doubting Thomases" became strong supporters of blister rust control work after visiting this area.

GOOD EXHIBITS DRAW BEST ATTENTION OF PEOPLE.

In York County Maine it has been my experience that an exhibit is one of the best ways in which to draw the attention of people to Blister Rust, and to arouse a lively interest. I might add that an exhibit, plus talk, makes the ideal combination as the speaker is then able to emphasize his remarks and create a more lasting impression. I have known many cases where a person would look at a blister rust exhibit, and merely show signs of bewilderment until the disease had been pointed out and fully explained.

Exhibits at Fairs in York County have given excellent results and have been worth the time and effort spent upon them. A blister rust control agent can meet more people in a shorter time, and with less effort than in any other way, for the simple reason that the people are all coming to him. The average New England farmer is more or less conservative, cautious, and difficult to approach with a new idea. He is usually very slow to enthuse over anything; especially if it is going to cost him something. When a farmer goes to a Fair, it is usually to see and hear everything that is going on, and for that reason he is rather more open minded and anxious to learn than at most any other time.

I have made it a rule when exhibiting at Fairs not to be too alert and businesslike when a farmer stops to look things over. I give him plenty of time to examine the exhibit and then break in with some kind of a remark about something. If they warm up to talk, all right, if not, I don't try to force the conversation. It has been my experience that if you hop on them with a number of questions they will hop away like a young partridge and leave you wondering why.

An exhibit of Blister Rust in a store window or Post Office will attract much attention, and be very instructive. Many such exhibits were placed in York County last spring when the pine were fruiting. I will relate on incident which proves their value, at least, to me.

I had placed a log with a big blister rust canker, in the window of the Farmers' Union, a grain store, in Saco. It bore this sign. "Blister rust looks like this in the spring. Look for it!" An old farmer came along almost before I had gotten out of the window. He stood beside me in the street looking it over for a while and then said, "I'm going to go out looking for that stuff as soon as I get home." I sat in front of that store for fully fifteen minutes, and saw at least fifteen people stop to look it over and exclaim at the yellow blisters. Some even crossed a busy street attracted by the others who were looking on.

For some reason which I have yet to discover, people are afraid to send in or put down their names. Last fall I put notices in three county papers for two weeks, offering to examine anybody's pine land in York County. I had hoped to get a lot of new names of interested pine owners in unworked towns; yet I didn't get a single answer. Someone remarked upon this same thing in the "News" a month or so ago. In two seasons of Fair Exhibits, I have had a sheet for people to sign who would like their pine examined, and so far have got one name. One thing seems certain: people do not refrain from answering or responding because of lack of interest; for interest in blister rust control is widespread, although it is sometimes hard to get action.

Errol E. Tarbox,
York County, Maine.

GOOSEBERRY PIE MUST BE OMITTED FROM MENU TO SAVE NEW ENGLAND PINES.

This is the title of a full-page article by Dorothy H. Goodwin which appeared in the Boston Globe, Sunday Magazine of August 3, 1924. It is well illustrated by five photographs of pines taken in Massachusetts, as well as by a large gooseberry bush which is labeled "especially dangerous in spreading blister rust to nearby white pines." This article is well written, and a good example of the way in which the feature writer can inform the public about the local control of blister rust.

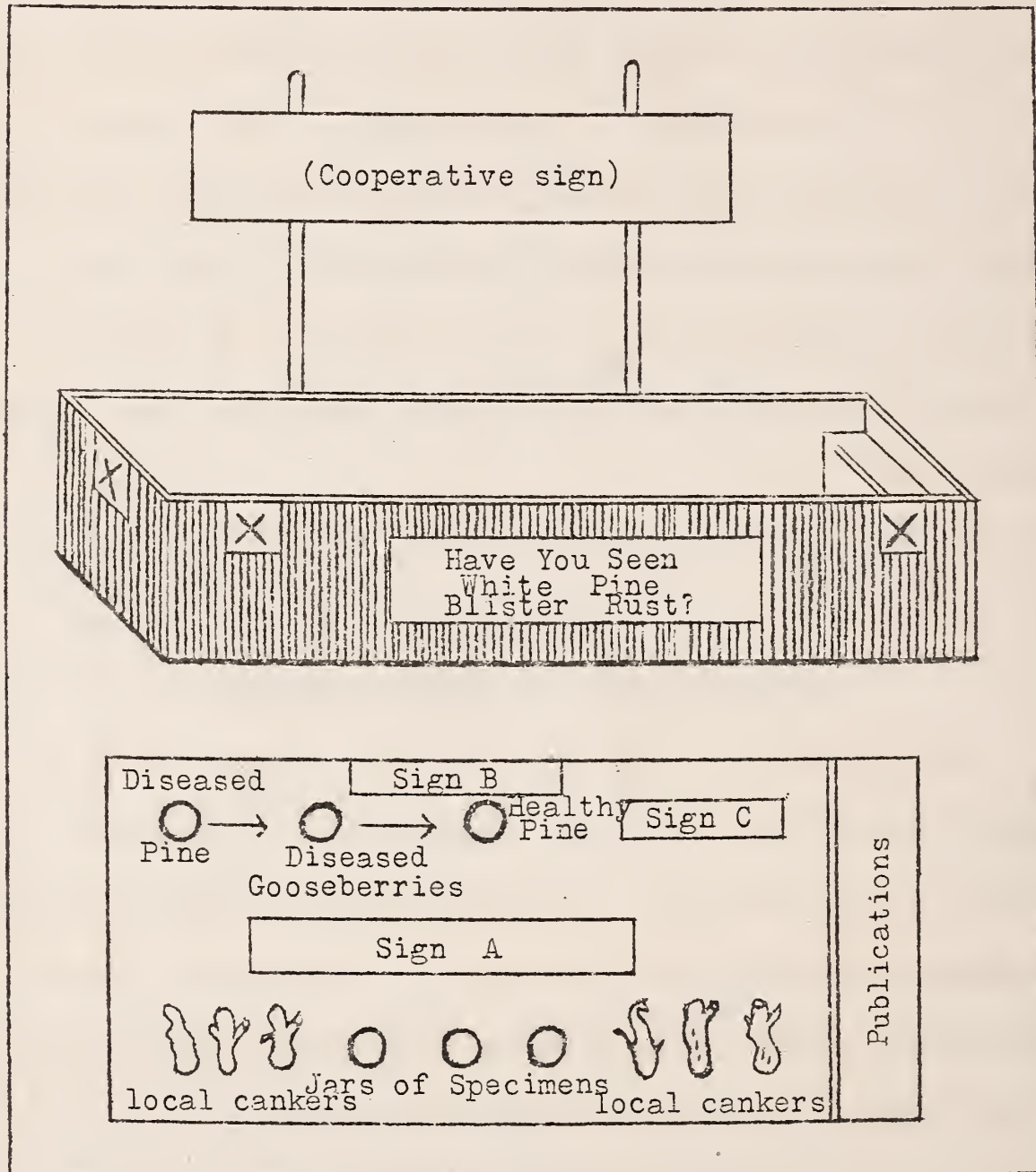
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NORTH STRATFORD PLANTATION VISITED.

One of the finest plantations in the State, that of Mr. John C. Hutchins in North Stratford, was recently visited by Messrs. Foster and Hale of the Department. It contains about 15 acres of white pine with spruce planted between. The spruce will later be cut for the Christmas-tree trade. This land was planted in 1918 with stock from the State Nursery and is in a very healthy growing condition today. Many trees have also been planted in back of the new school and surrounding athletic field at North Stratford. The work was done by the children who have taken much interest in the project. - New Hampshire News Letter.

A "TEASER" EXHIBIT

Gets those who pass up the others- can be used even where many blister rust exhibits have been previously staged.



- (A) "Have you controlled blister rust on your pine lot?-It can be done."
- (B) "Blister Rust spreads to white pine ONLY from currant and gooseberry bushes."
- (C) "Blister rust cannot spread to pine where all wild and cultivated currant and gooseberry bushes have been removed."

Booth of wooden framework trimmed with green cloth. \$1000.00 Reward posters (x) can be used on outside, with other signs as showing above. Entire exhibit hidden from view until person is within a few feet of booth, material and signs being placed on ground according to some arrangement as suggested above. This exhibit can be made to read from both sides by slight changing of arrangement of signs.

A. E. Fivaz.

BENEFITS FROM EXHIBITS

Window Exhibits

A window exhibit may be a huge success or a big failure. First of all the exhibit must be placed in a properly located store. A corner drug store is usually a busy place and ideal for a window exhibit. People get accustomed to looking at displays in the local drug-store window.

The exhibit when arranged should be self-explanatory. In other words one of the essentials of a successful exhibit of any kind, is a collection of neat appearing signs containing brief but pointed information. This is particularly true in the case of the window exhibit which has to tell the story in itself, since it is usually unattended during most of the time it is on display. In Massachusetts, the "blue-print" type of sign such as is used so extensively in New Hampshire is being used this season practically to the exclusion of other types. The gummed letters which are used on the tracings are very neat and additional copies of the signs are easily obtained at small cost and without additional labor. There is no excuse for having shop-worn signs with any exhibit. Whenever possible, local color should be added to the exhibit by using specimens from places in the same town where the exhibit is held and have them labelled accordingly.

The arrangement of the material in the exhibit is, of course, of fundamental importance. Any window dresser will tell you that some degree of symmetry is essential and that there should always be some outstanding central feature to immediately attract the eye of the observer. A big placard identifying the exhibit serves this latter purpose.

Perhaps of equal importance with the character of the exhibit itself, is the necessity of stimulating interest in the store in which the exhibit is located. Be sure that the proprietor and his clerks understand the exhibit and instill in them the idea of the necessity for a display of the community spirit. Leave a few circulars for them to distribute.

At most of these store exhibits a note-book is left where pine owners may sign up for a free examination of their woodlot. The results obtained have been encouraging. In the town of Middleboro for example, 39 signers were obtained; in West Bridgewater, 26; in East Bridgewater, 34, et . In one instance, it was found afterwards, that nine owners voluntarily removed their cultivated bushes after looking over one of these window exhibits. If you have many cultivated Ribes to contend with, this counts!

Fair Exhibits

With the exhibits at the fairs, one of the most essential things is to obtain a good location. It should be where it will attract attention and yet in a place where a number of people may stop and obtain a thorough understanding of the exhibit and the story it is there to tell. I believe that more good can be accomplished at the small local fair than at the larger fair but at the same time do believe that an exhibit at the large fair yields results sufficient to continue them.

I contend and will continue to contend that exhibits have an important place in this work of ours and do a whole lot of good in educating the people. It does more than this, it strengthens the confi-

dence of the people in the blister rust control program. Many individuals have told me personally, and voluntarily, that they never believed in the disease until they saw the exhibits we have been putting on in Plymouth County. This simply brings us back again to the old saying, "Seeing is believing."

E. M. Brockway, Plymouth County,
Massachusetts.

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BLUE PRINTS MAKE BLISTER RUST EXHIBIT ATTRACTIVE.

Mr. C. C. Perry, State Leader of Massachusetts, has just sent in a number of very interesting blue-prints which are being used in connection with various exhibits in his state. The original cards from which the blue-prints were made were probably lettered with black gummed letters. The wording of these signs and size of the print is indicated below:

MASSACHUSETTS DEPARTMENT OF AGRICULTURE
UNITED STATES DEPARTMENT OF AGRICULTURE
CO-OPERATING

NOTICE
TO
PINE OWNERS

HAVE YOUR WHITE PINES
BEEN PROTECTED
AGAINST THE

WHITE PINE
BLISTER RUST

FOR INFORMATION
ABOUT THIS DISEASE
GET IN TOUCH WITH

Earle M. Brockway

BLISTER RUST AGENT

Plymouth Co. Extension Service - Brockton.

WHITE PINE BLISTER RUST

EXHIBIT

U.S. & MASS. DEPARTMENTS OF AGRICULTURE

Size
3-1/2' x 14

IS

WHITE PINE BLISTER RUST

SERIOUS

?

LOOK AT THESE SPECIMENS

AND JUDGE FOR YOURSELF

Size
1'10" x 11-1/4"

PREVENT FURTHER

DAMAGE TO WHITE PINES

BY REMOVING

CURRENT AND GOOSEBERRY

BUSHES THIS YEAR

Size
1'6" x 8 in.

IF YOU HAVE NOT RECEIVED

YOUR CIRCULAR ON

BLISTER RUST

IT IS WAITING FOR

YOU AT THIS EXHIBIT

Size
1'5-1/2" x
7-3/4"

THESE WHITE PINES
SHOWING DAMAGE BY
BLISTER RUST
ARE FROM TOWNS IN
THIS COUNTY

Size 1'2-1/2" x
7-1/2"

HERE IT IS!
BLISTER RUST.

Size 1'2-1/2" x
5-1/2"

THIS SPECIMEN
FOUND IN

White space in which name
of town is inserted in 3/4"
black letters. Size 1'x5"

BLISTER RUST

Arrow - 1'2-1/2" x 3"

A WORD OF APPRECIATION

White Mountain National Forest
Gorham, New Hampshire.
Sept. 12, 1924.

Mr. E. C. Filler,
Boston, Mass.

Dear Mr. Filler:

Reference is made to the cooperative arrangement made by Pathologist S. B. Detwiler and District Forester Reed, in regard to starting the Blister Rust Control Work on this Forest.

The cooperation promised by Mr. Detwiler has been fully provided by your office and I want to express my appreciation for the assistance the Bureau of Plant Industry has given the Forest Service. We all now have a better knowledge of the damage resulting from blister rust, and the best methods for the eradication of Ribes. Undoubtedly the example set by the Federal Government on its own lands will be one of material assistance to your Bureau in securing more cooperation from the private owner.

Before Mr. Hodgkins left, I personally informed him that I appreciated his untiring efforts to assist us with this work. I want to make this a matter of record since Hodgkins' experience, knowledge and ability to instruct others has been of the utmost assistance to us in starting this work.

An extra copy is enclosed for Mr. Hodgkins, and I am also sending extra copies to District Forester Reed.

Hoping to see you from time to time, I am

Sincerely yours,

Ira T. Yarnall
Forest Supervisor.

WHAT IS THAT EXHIBIT ABOUT?

One of the most annoying moments in my blister rust control work came to me at a country fair where I had arranged a small blister rust exhibit. It happened this way: a man and woman (and judging from the careful way in which she watched him they were husband and wife) approached. The couple stopped at the blister rust booth and without comment inspected the various specimens and placards spread out before them. Finally, after quite a lengthy period, during which the agent had been beaming with smiles of pride over the exhibit, the man said, "Wa-ell Fanny, what's this exhibit about?", and Fanny shrugged her shoulders. Of course, the agent, with the smiles completely wiped off his face, came to the rescue supplying the information which evidently the exhibit did not.

The point to be stressed was the mistaken confidence in the explanatory qualities of the exhibit. The exhibit was clear only to someone who already knew blister rust, whereas for an ordinarily uninformed individual it proved complicated and so very much a failure. Upon analysis the trouble was found due to the use of such terms as blister rust, spores, Ribes, fungous disease, which in themselves would not produce the desired impressions. Further analysis revealed the need of visible invitations to examine hand specimens and to take descriptive bulletins when furnished, as natural shyness coupled with "company" manners usually prohibited much initiative on the part of the spectator.

A blister rust control agent can be useful as well as ornamental while standing by an exhibit at a fair or similar place; but in the case of window displays, post-office displays, or railroad-station displays, the

agent frequently is not near by. In such places everyday terms and phrases are essential. The public in general become quickly disinterested when they encounter confusing names and words. Lack of interest in an exhibit frequently indicates unproductive labor.

The moral is that definite thought should always be given to making exhibits that are unquestionably self-explanatory.

A. D. McDonnell. - Conn.

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Editor of the Blister Rust News:

In the spring of 1919 a considerable area at Temple, N. H. was scouted for Ribes and the location of each patch of these bushes carefully described. In July eradication on this area was needed for the carrying on of spore trapping experiments by the Office of Forest Pathology. One of the patches of Ribes found in the spring had been over-grown by blackberry to such an extent that even with an accurate description of their location they could not be found in July. A nest of hornets had been established so close to the location described that it was thought advisable to avoid a "case of the hives." Ask Jack Frost about hives and compensation.

R.

" EXHIBITS PLACED "

The title of this article meets our eyes every day and every month on our BRE 2 report. Human nature is the same everywhere I presume. Personally I like to put something in the column following these two words, other than a few goose eggs. I suppose we all do, if for no other reason than to show that we are not slighting any phase of our work. As the FAIR season draws near, I begin to ponder over a few questions concerning "Exhibits Placed". 1. Do exhibits mean anything? 2. Do they secure enough cooperation to pay for the time and money expended?

I guess they mean something! For instance, a window exhibit in a city or large town, usually means a waste of good window space and a lot of time. It reaches very few pine owners. It does reach the industrial class to a certain extent. This class is not interested in pine forests except in a vague sort of a way. They admit we should have them, that we should protect them perhaps, but that is their limit.

A window exhibit or a Post-Office Exhibit in a small town appealed to me until I inquired of each cooperator if he or she had seen the exhibit. The answer was invariably, "No"! People in the country telephone for their supplies and the rural carrier brings their mail. This class of exhibit does not pay in my district. They do not secure cooperation enough to warrant placing them. Why waste time and money?

How about exhibits at Fairs? Do they pay? "Yes and No", is my answer to this question and I will tell you why I answer as I do.

Last year I had a four-day exhibit at the New England Fair which

is held in Worcester, Mass. To take care of this exhibit, I had to stop the eradication work, when I should have been pushing it to the utmost. I was given space in one end of the cattle sheds; about as appropriate as the Sahara Desert. I didn't complain at that, until they put sheep in on the other side. Coming from the cattle part of Montana, my menu does not include mutton, and that's that. Blister Rust - Cattle - Sheep. Some Combination! I took my post at the cattle end of my exhibit, so I was only mistaken for the Hereford's Chamber Maid 40 or 50 times while endeavoring to land a few pine owners.

Blister Rust sold as good as the "History of Mars" in ten handsome volumes. The total attendance for one day was 66,000; 3,000 passed the exhibit and they didn't waste any time doing it either. They were in the wrong place and knew it. So was I and I knew it too. I explained blister rust to a large number of people of course, distributed literature, and all that. But what did it all amount to? Moral Cooperation? No! Not by any stretch of a most vivid imagination. The majority of those people were not in a position to give it. They were mostly factory workers and we get no cooperation from them, moral or otherwise. Where we do get moral cooperation, I will explain later.

The educational end of the large Fair has become a side issue. The amusement end has been built up, added to, and made more attractive each year. The primary reason for this is as we all know to get the "big gate". Since the agricultural class does not provide the patronage that would pay expenses and show a profit, the financial success of the Fair must depend on its ability to draw out the city people. It succeeds

in doing just this. The average farmer does not attend the Fairs; his work does not permit him to do so. He is compelled to add to his monthly milk check by working out at whatever he is able to get in order to live and pay his bills.

So much for the large Fairs. Let's look at the small or local Fair.

The primary object of the small fair is to make money of course. It has the typical drawing cards of the large fair. But it does offer to the Agent an opportunity to exhibit that the large fair does not provide. Why? 1. The exhibitors are usually local or nearby farmers whose stock or products are not quite up to the standard of the large fair. 2. It is more agricultural in its aspect. 3. It draws the average farmer because he does not have to lose a whole day from his work. 4. His COMMUNITY SPIRIT is appealed to.

I feel sure that a neat exhibit of blister rust at a fair of this kind pays dividends. The average farmer is the pine owner; he is there and can be sold. I do not think, however, that we should exhibit each year at the same fair. The farmer soon loses interest in anything that is constantly repeated. The blister-rust-control campaign being quite new, it attracts attention and is gathering momentum every day. The old song and dance on "How to feed Cows", is worn out. We are the ones to put on the new record, be listened to, and our work appreciated by those whom we can help with their blister-rust problems.

This is where we get our MORAL SUPPORT. The satisfied cooperator, like the satisfied customer in business, is bound to tell his friends

and neighbors about the Agent's work in the district, what he thinks of it. He warns his neighbor to cooperate while he has the chance. The pine owner is expecting you; he plans his work so that he can go with you in the woodlot. When you call he is ready. Could anything be easier? Did you get it as a result of an exhibit? If so; how much?

To my mind, eradication work is more important! Getting the owner out on the job and educating him by experience has a far-reaching effect. He will never forget a gooseberry after he spends an hour of an evening digging spines out of his hands. You can't beat Nature! Why try?

If it seems essential that exhibits be placed, should the Agent be called upon to sacrifice from two to five days from his field work to take care of each case? A better plan might be for one man to be given charge of all exhibit work. Let him do the Fairs held in the State; the Agents can then push their field work to the limit.

We must bear in mind that campaigns are won in the field and not in the office. The best of office plans miscarry when put into practice. This I think is also true of exhibits. Our one best bet is the Natural Exhibit. - THE FIELD Get the pine owner out into the pine lot.

E. J. McNerney, Worcester (South) County,
Massachusetts.

FORESTRY FIELD DAY AT NORTHFIELD, NEW YORK.

On August 14, a Forestry Field Day and Picnic was held at Pine Grove Farm, Northfield, Delaware County, under the auspices of the Delaware County Farm Bureau Forestry Committee, in cooperation with the New York State Conservation Commission and the Extension Department of the State College of Agriculture at Ithaca.

There was a big attendance, talks on forestry by prominent men, including Congressman John D. Clarke, E. A. Sherman, Assistant United States Forester, Franklin Moon, Dean of the New York State College of Forestry at Syracuse, C. R. Pettis, Superintendent of State Forests, etc., community singing and a basket lunch party.

The Conservation Commission had quite an extended exhibit illustrating reforestation, white pine blister rust and white pine weevil. This attracted a great deal of attention and it took five representatives to take care of the crowd that assembled there. Our exhibit was so interesting and instructive that we had requests to show it at three county fairs and several county picnics.

Mr. Pettis reports a sale of approximately 400,000 trees during the day. Pretty good work! - The Observer - Conservation Commission
State of New York.

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R. A. Sheals in letter of September 18th to Dr. Martin -

"Our Forestry exhibits at the Fairs have been well liked. Perry had the best blister rust exhibit at Springfield that I have seen."

A FOUR-POUND BLISTER RUST DISPLAY

It is a known fact that more goods can be sold if the salesman has the real article in a neat, compact, display case where his customer can see what he is getting. This same principle applies to blister rust control work. Carry the goods with you. For the purpose of a sales or display outfit, a small black case measuring eleven inches in width by twenty inches in length and two and one-half in depth, is utilized. It is hinged so that when opened, like a book, the interior presents a display surface of twenty by twenty-two inches. One-half of the case is deep enough to hold four eight-inch test tubes containing infected pine twigs, showing fully developed aecia, while on either side of the tubes are placed two small infected stems showing the characteristic swellings and constrictions of a blister rust canker. All specimens are wired to a white mount that is easily removed in case it becomes necessary to change the specimens at any time. The opposite half of the case serves as a Riker mount, there being ample room to display several leaves of each species of Ribes found in the district. In order to make use of all the available surface, a pane of glass is fitted in the top or cover of the case as it is closed. Under this glass there is displayed a colored photo of an infected tree together with the printed headlines from one of the blister rust posters.

When the case is used in conjunction with a talk or with a larger exhibit, it is held in an upright position by means of a folding stay attached to the back. The case complete weighs four pounds and all for the small expenditure of about three dollars.

G. S. Doore, Franklin County, Massachusetts.

Proposed Exhibit at THE EASTERN STATES EXPOSITION, Springfield, Mass.

At the Eastern States Exposition at Springfield this year, it is planned to arrange the Massachusetts blister rust exhibit as a replica of a corner of an old New England pasture, with its characteristic stone wall and natural barway. Along the wall will be a few specimens of extra large Ribes cynosbati and in the background a natural arrangement of a group of badly infected pines showing all the characteristics of blister rust. Old sods and pine needles will be used freely to make the scene as natural as possible. Neat signs of the "blue-print" style will be used, not so freely as to detract from the exhibit but at the same time in sufficient numbers to tell the story effectively. In other words, the plan is to put on a roadside demonstration in miniature.

For an added attraction, it is planned to have a bottle of the fruit of Ribes cynosbati for a guessing contest; the person guessing nearest to the correct number in the bottle, will be given a prize of 1000 white pines for forest planting. The pines will be donated by the Hampden County Improvement League of Springfield, the organization which is cooperating in the blister rust control campaign in the Hampden - Hampshire (South) District.

R. E. Wheeler, Hampden County, Massachusetts.

"EAST IS EAST AND WEST IS WEST"

E. E. Carter of the Forest Service has recently called attention to the Census Bureau tables giving the lumber production for 1922 by States. "It is here shown that more lumber was cut in 1922 in North Carolina than in Idaho, and more in Maine than in Montana. New Hampshire led New Mexico, and Vermont and Massachusetts each produced more than Arizona. Connecticut and Maryland precede Colorado and South Dakota. Even Delaware and New Jersey are ahead of Wyoming and Utah."

He adds, "Who said the forests of the Atlantic States amount to nothing? 'Second growth' as a source of lumber is already a real thing. There is a lesson in this for all foresters. Can we learn it - and use it?"

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WOODS USED FOR COLONIAL INTERIOR DECORATION.

The varieties of wood used for interior finish in these old mansions add to their charm. In New England the wood is principally white pine. When painted this wood has proved to be unusually enduring, as many of the buildings made of white pine are now in an almost perfect state of preservation after two hundred or more years of wear and tear and exposure to the elements. -----Author's Note accompanying article by E. B. Allen, entitled "Early American Carving" - From American Forests and Forest Life-July 1924.

NEW TYPES OF LOCAL EXHIBITS PROVE TO BE OF VALUE.

In the early days of blister rust control work, our exhibits were largely those shown in connection with the County Cattle Show or the so-called Agricultural Fair. Then followed the use of the local store window as a means of carrying blister rust information into the local community. With the beginning of the intensive control program, there has been a further increase in the use of the local type of exhibit to include such as those used at the Annual Grange Exhibition, at the Post Office, and at the local Farmer's Club.

This season in the Bay State, two new types of local exhibits have been reported as productive of results. Agent McNerney working in a district that produces a large quantity of milk, discovered that every morning at about 6.30 a group of a dozen or more farmers appeared at the depot to await the arrival of the morning milk train. Here was a chance to make a "killing" and so the alarm clock was set a bit early in order to have an exhibit at the loading platform at the local depot.

The other new type, in Massachusetts at least, is one reported in August by Agent Doore in Franklin County. The event was OLD HOME DAY in the towns of New Salem and Warwick and the blister rust control exhibit created no little interest among those who attended the festivities of the day on the Town Common.

It is in just such instances as these that new cooperators are obtained. It's a great place to get down to brass tacks with the local people. They will talk to the blister rust control Agent if he is there.

C. C. Perry.

BLISTER RUST EXHIBIT FOR HIGH SCHOOLS

A. A blister rust exhibit must conform to the rules for general school exhibits.

1. A general school exhibit.

- a. Must be clean and orderly.
- b. Must be easily placed and removed.
- c. Must be easily transportable from school to school.
- d. Must be varied in its appeal - to maintain interest of pupils.
- e. Must get ideas quickly and clearly before minds of pupils.

2. Best means is by using a wall rack, and a stand or shelf for displaying hand and preserved specimens. The wall rack should have movable panels, 6 or 8 preferred, for pictures and specimens.

B. Blister rust wall rack and shelf display.

1. Wall rack of six panels.

Panel 1a. Tree as a living plant, its functions, pictures of tangential, vertical, and cross-sections; short explanations of transpiration, respiration, food manufacture.

Panel 1b. Specimens of tree seeds in small glass vials, about 50 species; pictures of seed beds in State nursery, preparation, etc.

Panel 2a. Specimens of evergreen seedlings and transplants from nursery, about three species, waxed and mounted. Red pine, white pine, Norway spruce, suggested.

Panel 2b. Pictures of crews planting forest trees---boy scouts, girl clubs, school children, etc. Small legend about ease and speed of planting.

Panel 3a. Pictures of reforested areas of different species, and different localities and conditions. Legend showing how reforestation pays in dollars and cents----this large enough to be prominent.

Panel 3b. Leaves of commercial trees, especially softwoods, waxed and mounted. All grouped about a larger specimen of the white pine as a center. Legend under each stating species, principal use, etc.

Panel 4a. Forest Fires---Red Demon of the Woods. Suggested as taken from the well-known forest-fire poster of the wolf in red with a background of a burning forest. Figures as to forest fire damage.

Panel 4b. Prevent Forest Fires---It Can Be Done. Legend showing that 85% (?) of the forest fires are caused by carelessness in the woods. Small panel imposed showing the common rules for preventing fires in the forest.

Panel 5a. Insects Damage Trees as well as Farm Crops. Pictures of insects and damage done by them. Suggested:-locust borer, pine weevil, gypsy moth, pine bark beetles, etc.

Panel 5b. Forest Insects Can Be Controlled. Pictures showing gypsy-moth workers; controlling white pine weevil, etc. Legend giving facts regarding control of above.

- Panel 6a. Pine Trees Form Our Best Timber Tree. Pictures showing pine stands past and present; or two maps of N.Y. State showing stands past and present. Table:- white pine is used for these purposes:-1,2,3,4,etc. We cannot use it unless we have it. We cannot have it unless we ----
- Panel 6b. CONTROL the WHITE PINE BLISTER RUST. IT CAN BE DONE. Table: What is blister rust? ---- Disease kills w.p. trees.

Where did it come from?----Europe.

What are its habits?-----Lives on currants and gooseberries, etc.

Specimens of B.R. on
branches of pine----
mounted.

Specimens of the spring
stage on Ribes-----
mounted.

Specimens of the B.R.,
fall stage, on the
Ribes----- mounted.

Specimens of healthy
pine trees -----
mounted.

H. H. Knowles
Gloversville, N. Y.

Editor: Mr. Knowles has outlined a "cooperative exhibit" which would tie in blister rust control with forest planting and protection.

Vermont Ribes

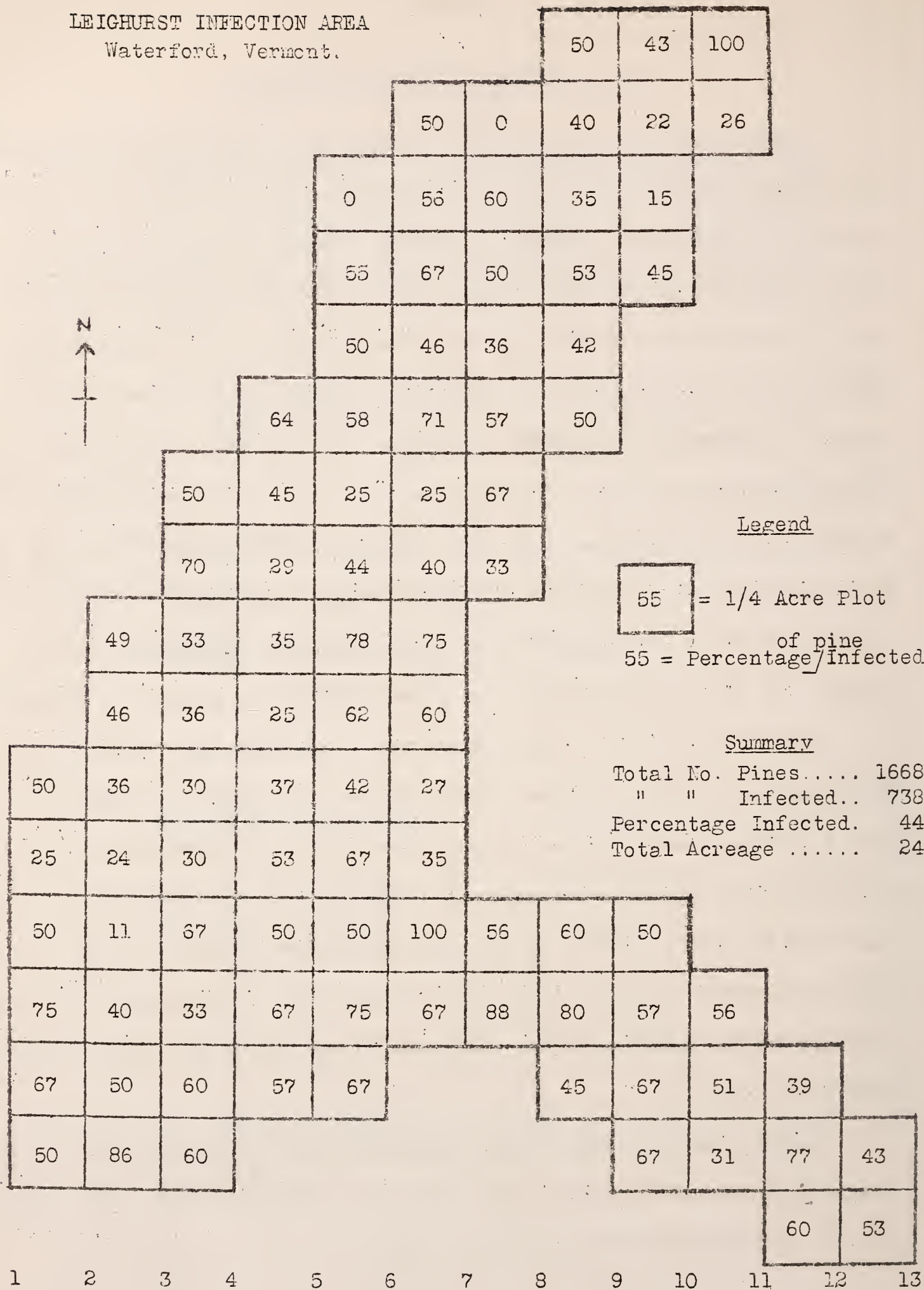
THE WATERFORD (VT.) DEMONSTRATION.

A successful interstate blister rust field demonstration was held at the Leighurst farm in the town of Waterford August 28 at which the state foresters and extension directors from New Hampshire and Vermont participated. About 75 people were present and a number of cooperators were secured. Refreshments, consisting of coffee, doughnuts and lemonade were served at the Lee farm house by the owner. This area of 24 acres was studied to determine the amount of blister rust damage. A small part of the acreage consisted of a mixture of a dense stand of pine and spruce 8" to 18' D.B.H. One-quarter acre plot in this mixture showed 77% of the white pine diseased. Old field pine and reproduction comprised the balance of the 24-acre area. Of the 1668 pine trees examined, 738 or 44% were infected. On two of the quarter area plots 100% of the pines were diseased.

Copies of the following diagram and notes were distributed at the demonstration. Colored charts were displayed on a number of observation points showing when infection entered, how far it had advanced over various periods and present percentage of infection. Signs displayed at intervals told the story of Blister Rust and emphasized important facts. All Ribes were marked by red "flags" and in many cases red streamers led from tree cankers to infected Ribes. Infected trees were conspicuously marked with white bunting.

Several of the largest lumbermen in the state were present at the demonstration, and were quite impressed, and a number of men were "signed up" for eradication of their Ribes in 1925.

LEIGHURST INFECTION AREA
Waterford, Vermont.



U.S. Department of Agriculture
Elister Rust Control
In Cooperation With

VERMONT FOREST SERVICE

8-28-24.

NEW HAMPSHIRE FORESTRY DEPT.

FACTS FOR YOUR INFORMATION.

White Pine

1. It is a native forest and woodlot crop.
2. It grows on poor soils not suitable for agriculture.
3. It will yield 1000 B. F. per acre per year.
4. It will give a profit of \$10.00 per acre per year.
5. It can be harvested during the farmer's slack season.
6. It keeps the farmer's teams busy in the winter.
7. It gives employment to many thousand persons.
8. It furnishes lumber for our homes.
9. Leighurst House was built in 1860 from white pine.
10. The pine was grown on this farm.
11. It was sawed in a local mill.
12. It saved excessive freight rates so common today.

ARE YOU GROWING YOUR OWN PINE?

Blister Rust

1. Blister rust kills white pines.
2. It has killed pines at Leighurst.
3. It is killing pines in your community.
4. It cannot go from pine to pine.
5. Currants and gooseberries spread blister rust.
6. Pines cannot be grown with currants and gooseberries.
7. The disease can be controlled.
8. All currants and gooseberries should be eradicated.
9. This action stops the spread of the disease.
10. The cost of eradication is slight compared to the value of your pine.
11. Trained crews are the most economical and efficient in eradicating.
12. Nearly a million and a half acres have been eradicated in Vermont and New Hampshire.

IS YOUR PINE LOT PROTECTED?

IF IT ISN'T--COMMUNICATE WITH YOUR STATE FORESTER
or
HAVE YOUR LOT EXAMINED BY THE BLISTER RUST CONTROL
AGENT IN YOUR DISTRICT.
IT COSTS YOU NOTHING.

A PLAN FOR A WINDOW EXHIBIT.

The window selected should be quite large, ample enough to give the desired effect for the exhibit. I should suggest that it be at least 10 or 12 feet in width, the depth being relatively unimportant.

A Ribes bush should be potted, using either currant or gooseberry plants. It may be placed in either an earthen pot or a wooden box, the latter preferred. This potted Ribes should be placed at the left-hand extremity of the window, as one stands on the outside looking in.

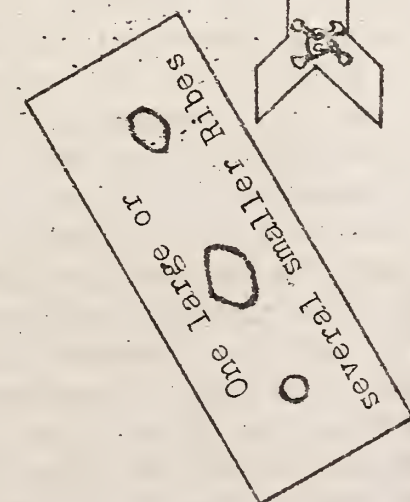
A fairly good-sized white pine tree showing stem and branch cankers should be placed with its roots in a box, painted green as that in which the Ribes is rooted should be painted. Tags on the branch and stem infections call attention to the points of injury. This boxed tree with blister rust infections should be placed in the window, at the opposite extremity from that in which the Ribes was placed. This brings the pine on the right side of the window as one looks at the exhibit from the outside.

A large arrow may be cut out of bristol board, about five feet in length, and with corresponding sizes for the head and for the feathered end. These might be about eight inches wide, but the exact sizes can only be ascertained by actually cutting the arrow out and changing head and feathered tip to suit the size of the shaft. The shaft might be at least two inches wide. On the head, have painted a pine tree in color, green with shadows of blue-black, as large as the size of the arrow-head will permit. On the feathered end of the arrow, have painted a skull and cross-bones; suggested that this be in dull red, with black openings at the eye-holes and the nose; the teeth in white. On the shaft, center the words "Death to Pine Trees", printed in one-inch letters. This arrow extends from the potted Ribes to the boxed pine tree with infection.

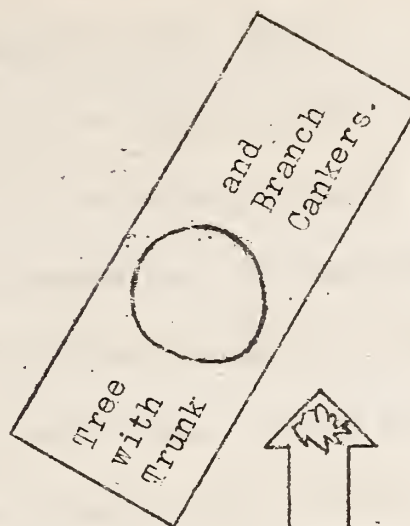
In the central background, not dwarfed by the exhibit, place a sign reading:—"The Pine Trees of Northville (local place) are being killed by the White Pine Blister Rust. Get Aid Before it is T O O L A T E." This sign might be 2 by 3 feet in size, with the lettering extending the long way of the sign. To one sign of the main exhibit, have a small sign reading: - "Free literature inside, help yourself." Another on the other side to balance, reading "Leave your name and address, and have your pine looked over without charge."

H. E. Knowles, E. Y.

Pine Trees of
Northville
Are being Killed
By
White Pine Blister Rust



DEATH TO WHITE PINE TREES



Leave your
name and
address.

Free
publica-
tions
inside.

NOTES FROM VERMONT

Exhibits will be held at eight of the Vermont fairs this year. All Ribes eradication work under state supervision outside of the regular districts has been discontinued for the season, and in the Brattleboro and St. Johnsbury districts very little more will be done this year due to the rapid defoliation of the Ribes. Agent Rose reports that conditions in the White River Junction district will permit crew work probably for the balance of the month.

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A NEW GOOSEBERRY DISCOVERED IN FLORIDA.

Dr. F. V. Coville, of the Bureau of Plant Industry, has recently published a short article on Grossularia echinella - Spiny-fruited gooseberry from Florida, in the Journal of Agricultural Research, Vol. 28, No. 1, April 5, 1924. This new gooseberry was found by Dr. Roland M. Harper, of the State Geological Survey of Florida and Dr. H. Kurz, of the State College for Women.

Dr. Coville writes:

"In its geographic distribution Grossularia echinella is of special interest because it is the southernmost of our Atlantic seaboard species of this genus, growing in Florida, at an elevation of only about 200 feet above sea level, and in the principal region of production of the Satsuma orange. It may therefore be regarded as an almost subtropical representative of a north temperate genus. * * * * Should it be judged desirable that the agricultural range of the cultivated gooseberries be extended farther south than it is now possible to grow them, and that an attempt be made to establish gooseberry culture beyond the range of the white-pine forests, the new species offers a southern climatic adaption which it may be possible to combine with the edible qualities of the garden gooseberries through hybridization. The culture of gooseberries in the southern coastal plain would carry no menace to the pine forests of that region because the hard pines are immune to the blister rust of the white pine, and, furthermore, the gooseberries in that region would not even have the disease because there are no white pines from which to contract it."

Note: Berries collected by Doctor Harper on May 10, though still hard, green, and unripe, had reached the astonishing diameter of 30 mm. (over 1 1/8 inches including the spines, and the body of the berry 22 mm. (over 3/4 of an inch).

DATA ON OCCURRENCE OF WHITE PINE AND THE BLISTER RUST IN WISCONSIN.

Since leaving Madison on Aug. 11, I have seen a great deal of excellent mature white pine, as well as much good reproduction.

In Waupaca County, in the vicinity of Weyauwega, Fremont, New Condon and Readfield, I probably saw close to 3,000,000 board feet of white pine above the pulp wood stage, much of which is mature. There is also much good reproduction, small to medium. I took many photographs, some of which are very good.

In Shawano County, off the Indian reservation, I found many good pine woodlots east, west and south of Shawano, most of which is medium in size; however, much of it is mature, and there is considerable reproduction in places.

Of course, I found much mature white pine as well as medium pine on the Menominee Reservation, and I found more R. cynosbati than I was aware of previously; but only at Keshena did I find any signs of blister rust. On St. Joseph's Hill I found 7 Ribes bushes infected. While eradicating on St. Joseph's Hill, five large R. cynosbati bushes in a group were found within ten rods of where the infection was worst in 1919 and 1920. One of these bushes, about 40 ft. L. B. S., was badly infected, while three others had a few leaves infected. Across the road from the Indian school, south, I found one bush with about ten leaves infected. This bush was found within 10 rods from where I found one infected in 1920.

Yesterday I saw probably 1,500,000 feet of excellent mature pine, and much reproduction, in the towns of Larabee, Waupaca County, and Pella, Shawano County, northwest of Clintonville. Wm. Thompson saw much of this pine in 1922 and consequently I did not spend too much time there. Nevertheless, I went into many woodlots and took pictures besides scouting for the rust on Ribes.

H. J. Ninman

- SAVE YOUR PINES -

"During the past few weeks we have distributed Blister Rust "Save Your Pines" posters as follows:

Railroads		Post Offices	
E.Y., N.H. & Hartford	667	Massachusetts	305
Central Vermont	250	Vermont	393
Maine Central	250	Connecticut	<u>357</u>
Boston & Albany	75		1555
Boston & Maine	<u>568</u>		
	1310		
			<u>Grand Total 3365</u>

Maine - Will be sent out this
week to post offices 950
Total 4315 "

E. C. Filler.

"Results from sending "Save Your Pine" posters to postmasters can already be seen in this section. In Putnam they have it pasted on the front window. In Brooklyn it is conspicuously displayed."

A. M. Tucker.

CALIFORNIA BLISTER RUST CONTROL WORK
UNDER WAY

The News Letter from the California Department of Agriculture for August 9th, has an item of interest to friends of George A. Root, formerly in Blister Rust Control Work in New England, who is now in charge of the work in California.

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"Pine Blister Rust Control Work in California for the season of 1924 took definite form, July 23, when G. H. Hecke, Director, State Department of Agriculture, approved the cooperative agreement with the offices of Blister Rust Control, Federal Bureau of Plant Industry and the California State Board of Forestry.

The purpose of this work is to secure the elimination of cultivated English black currants in the northern counties of California in order to prevent the spread of blister rust into the sugar pine regions.

General scouting will be conducted in northern California to determine if blister rust is now present in the state and to acquaint the public with the possibilities of serious damage by its presence, the value of sugar pine timber threatened by this disease, and the part played by the cultivated black currant in its dissemination.

Field work for this season will be conducted in Modoc, Lassen, Siskiyou, Shasta, Trinity, Del Norte and Humboldt counties. A general educational campaign will be conducted.

Under the cooperative agreement the federal office of Blister Rust Control will employ four men for the next two months to work under

the direction of Mr. G. A. Root, Junior Pathologist in charge of blister rust work in California for that Bureau. The California Department of Agriculture and the State Board of Forestry will instruct their employees and collaborators to assist in this field work in every way possible.

The field work will be conducted upon the basis of county units. After the work is properly organized, a thorough canvas of each county will be made by Mr. Root and his assistants to locate all plantings of cultivated Black Currants. When any such plantings are found, these men will endeavor to secure their eradication through voluntary action on the part of the owner.

Whenever it is compatible with their other duties each County Horticultural Commissioner will assist in the location and eradication of the cultivated Black Currant in parts of his county. They will be supplied with literature and exhibits explaining the disease and the work.

The educational program will consist of the use of exhibits and posters, publicity in local newspapers, talks before local meetings and the showing of blister rust motion pictures in order to acquaint the public with the potential menace of the pine blister rust disease.

Although this disease is not known to exist in California, the starting of this work at this time is deemed essential to cope with the blister rust menace now common in British Columbia and Washington. Extensive work has been carried on in Oregon during the past year similar to that projected for California."

F A R M F O R E S T R Y
M A K E S F A R M W O O D L A N D S P A Y

1. Helps farmer to grow more and better timber on the poorer lands by

Protecting the woods from fire and other injury
Improving them by the right kind of cutting
Utilizing timber properly on the farm

2. Helps owners to reclaim gully lands.

3. Helps owners utilize waste lands by growing profitable timber crops on

Poor Soils	Unused Corners
Steep Slopes	Eroding Soils
Rocky Lands	Wet Lands

4. Helps to increase the farm income by furnishing paying employment during the Winter.

5. Helps farmers to market timber direct to consumers at the highest prices in the form of

Saw logs	Fuel Wood
Cross Tiles & Piling	Wood for Paper Pulp
Posts & Poles	Staves, Handles, etc.

MAKE YOUR WOODLANDS
PERMANENTLY PROFITABLE

The above sign on Farm Forestry was recently posted in the office of the County Agent, at Torrington, Connecticut. - E. C. Filler.

Edit. I believe this poster which is 22" x 26" would be useful for the work of the blister rust control agents in connection with exhibits or at meetings before small bodies of pine owners.

This poster, mounted on cloth and fitted with top and bottom molding, can be obtained from W. R. Mattoon, United States Forest Service, Washington, D. C., at a cost of twenty-five cents.

WHERE LUCK HAS BEEN FOUND

by
Orison Swett Marden

- In thrift and foresight.
- In thorough preparation for one's life work.
- In mental alertness.
- In always being ready to lend a helping hand wherever and whenever needed.
- In being tactful and a good mixer.
- In holding the efficiency ideal of one's self and one's capabilities.
- In downright, constant hard work.
- In being ready for the opportunity when it comes.
- In courtesy, kindness and consideration for everybody.
- In helping one's self instead of looking to others for boosts, capital, or favors of any sort.
- In doing one's work a little better than others did theirs.
- In not being satisfied with anything but one's best, never accepting one's second best or a botched job.
- In always carrying some reading matter in one's pocket so that spare time could be utilized while waiting for trains or for those who were tardy in appointments; by reading for self improvement.
- In being cheerful, no matter how dark the outlook.
- In trying to make good in every possible way, while never taking advantage of others.
- In beginning the thing which something within one said one should and ought to do, no matter what obstacles stood in the way; by obeying one's good impulses promptly, before they quit prodding one.
- In never allowing one's self to believe that he was born to be poor, a failure, a mediocre sort of man or woman.
- In carrying the victorious attitude in everything, looking like a winner, talking like a winner, and radiating the confidence of a winner.

- In holding that the good things of the world were not made for a favored few, but for all God's children.
 - In substituting clear grit and persistency for the advantages which many others enjoyed from birth.
 - In believing that the best part of one's salary was not one's pay envelope, but in the chance to make good in every bit of work that passed through one's hands.
 - In keeping eyes and ears open, and mouth closed most of the time.
 - In the right attitude toward life, toward one's work, toward everything and everybody.
 - In choosing one's company, associating only with people who were doing their best to get on and get up in the world.
 - In the consciousness of one's partnership with the All-good and All-supply, with the Infinite Mind.
 - In learning through mental chemistry to neutralize the things which kill one's best efforts, - fear, worry, anxiety, jealousy, envy, malice, touchiness, anger, - thus to keep one's mind free for the larger things.
- - - - -

SEVERE BLISTER RUST INFECTION IN CONNECTICUT

In the town of Salisbury, we (Filley, McDonnell and Filler) found considerable infection on young pine, mostly 1922 and 1923 infections. In one area of about 20 acres, I believe at least 50% of the trees under 3 feet in height were diseased. The amount of infection and the realization that the diseased trees would soon die, made this area very impressive.

E. C. Filler.

BLISTER RUST EXHIBITS IN WINDOWS

This is one of the most important avenues of publicity which is easily accessible to the Blister Rust Control Agent. I will try to outline a few of the most important points in the placing of a window exhibit.

The display should be put in a prominent store window in the central section of the main street of the town or village. Since it is important to draw the attention of as many farmers and pine owners as possible, a store should be selected which caters to rural trade. With this in view I have always used Hardware establishments or drug stores. Either usually have excellent display windows, but I prefer the former from the standpoint of attracting the most rural people, while they are about equal for attracting general public interest. I prefer the smaller towns for getting the most really desirable publicity. I doubt if it is worth while to use store windows for display purposes on blister rust control work in towns or cities of over 20,000 population.

Of course the next thing is to secure permission to use the window. I prefer to go into the town or village and look the various windows over, until I select the one most desirable for my purpose, then get to the proprietor and explain my proposition. If you have written any newspaper articles they have usually heard of you and are perfectly willing to allow you to use the space, because it means advertising for them. It is also important to state that you will have an article in the local paper which will describe the exhibit and in which his store will be mentioned. However, don't mislead him into thinking that he is going to get a big write up. My sentence concerning the store usually runs something like this:

"Through the courtesy of Mr. of the store (or whatever name the store goes by) a Blister Rust exhibit has been - - etc." It is important that you have an article in the local paper calling attention to the exhibit; because this will attract a lot of people who might otherwise overlook it. Of course I have been refused the use of windows by proprietors who said no before they had heard my proposition and perhaps thought I had some kind of commercial graft to put across. I make such a merchant feel sad by placing the exhibit in his competitor's window.

The exhibit should be neat and well balanced. It is not advisable to put so much material in the window that it will be confusing. There are such a great number of things to be demonstrated about Blister Rust that this can easily be done. It must be arranged so that your central ideas can be put across in a short period. No one is going to look at your exhibit for a greater period than five minutes; he feels conspicuous after a couple of minutes.

Some object in the display should show up above other parts for the purpose of attracting attention. Dr. York, I think it was, designed a skull and cross bones on a tombstone beneath which is the inscription: "Blister Rust Kills White Pine Trees". This shows up for several feet and is certain to attract the attention of passersby. An exhibit in the spring of the year showing the mature aecia on a good sized pine stick is especially attractive and is one of the best things that can be used in a window display. I always place a small sign in the window stating "Free Literature Inside". With the publications I always place some self addressed, franked cards, which may be sent in requesting information or pine inspection. I am sorry to say that in all my exhibits not more than one-half

dozen of these cards have been sent in! The New York farmer or pine owner seems very reticent about using the mails. However, many publications are carried away by persons who are evidently interested enough to come inside.

I usually arrange to have the exhibit in the window for a period of at least one week. A ten-day period is better but you cannot always have the use of it just as you like. I do not obtain very many direct results from window displays, but I find that they help a great deal in personal interview work. In fully half of my interviews the owner states voluntarily that he saw something about the "Pine Blister" in the store down at the village. Yet, on the other hand, individuals whom you want to see the exhibit frequently know nothing about it. However, I am convinced that window displays are a great help and should be used very extensively. Not more than two window exhibits should be placed in each village annually. Have something different each time; avoid conspicuous repetition.

J. D. Kennedy, N. Y.

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THE THREE-WING PANEL EXHIBIT

Mr. O. C. Anderson of Rhode Island writes: "The Panel Exhibit received recently certainly is attractive. - Has many advantages over cabinet, -for one - being light and easily carried. Good work."

Thanks Andy - Our Motto is "Service". -- R.G.P.

NOTES MADE AFTER VISITING SEVERAL BLISTER
RUST EXHIBITS.

1. Cooperative sign is frequently missing from exhibit, and as a consequence visitors confuse it with other educational or even commercial exhibits. Cooperative sign should always be used, showing cooperation of all parties to agreement.
2. Wording of signs might be bettered.
 - (a) Negative statements should be avoided.
 - (b) Some legends have unpleasant or ridiculous allusions.
 - (c) Statements are sometimes indefinite, misleading, or too technical.
 - (d) Signs are at times inconspicuous or too conspicuous, due to size, style of lettering, neatness, placement of sign, etc.
3. Units of the exhibit should be connected up, the planning should not overlook symmetry and the probable location of the crowd with relation to the various parts of the exhibit. Excess material had best be eliminated.
4. Special lighting often improves an exhibit. Large possibilities in lighting now overlooked.

Fivaz.

NOTES FROM OFFICE OF FOREST PATHOLOGY

Dr. Perley Spaulding, Mrs. A. R. Gravatt and John R. Hansbrough have finished their studies at Warrensburg, New York, on the longevity of sporidia.

Dr. R. H. Colley's manuscript on "Biometric Comparison of the Uredinospores of Cronartium ribicola and C. occidentals" has been accepted by the Journal of Agricultural Research.

Dr. Haven Metcalf has left for the West to go over the plans for research work on the blister rust with Boyce, Meinecke and Bethel.

PERSONAL

California

Messrs. Jesse P. Bascom, Bernard S. Henry, Hans M. Hansen and Merrill A. Wood, were appointed Field Assistants August 15, 1924, to assist in the eradication of cultivated black currants.

District of Columbia

Miss Nina M. Schnell was appointed Clerk in the Washington Office:- appointment effective Sept. 3rd.

Mr. E. R. Ford has just returned from a six weeks' trip to New England. While on the trip Mr. Ford helped put across the Waterford Vermont Demonstration. Ford's part was the detailed study of the 96 quarter-acre plots.

Thurston L. Corbett and Robert S. Caruthers who have been working on the North Hudson Experimental Area, returned to Washington September 21st. Corbett will return to Cornell University and Caruthers to the University of Maryland to pursue their studies.

Massachusetts

Dr. Arthur W. Gilbert, Massachusetts Commissioner of Agriculture (State Cooperator for Massachusetts) has just been made chairman of the International Institute of Cooperation, which, according to the Boston Globe, "farm leaders count on to stabilize the cooperative movement among farmers by providing sounder management and to accelerate its progress by creating for it a more thoroughly informed public."

Dr. Gilbert was chosen probably because he has a wider acquaintance among the spokesmen for American Agriculture than almost any other member of the fourteen leading farm organizations that have joined in launching the Institute."

Minnesota

G. M. Conzet, who has been Acting State Forester since the resignation of Mr. Cox last winter, was recently elected State Forester of Minnesota for a term of five years.

William T. Cox, former State Forester of Minnesota, has opened an office as Consulting Forester at 385 Columbus Avenue, St. Paul, Minnesota.

New York

Mr. Robert Caruthers, who has been working on the North Hudson blister rust areas for the past three seasons, had an accident with the Federal Ford truck. It seems the "wish bone" broke, and the car ended up off the road. Caruthers was lucky, in that he escaped with only a broken nose, which has been X-rayed and set by a specialist at Glens Falls.

Vermont

Mr. Floyd M. Callward, recently appointed blister rust agent, has been assigned temporarily to Vermont where he is acting as assistant to the state leader.

Agent Bradder has announced the arrival of a baby girl. Congratulations are in order.

State Leader Riley has applied for leave of absence to attend the Yale Forest School this winter. He will leave the work September 15 and return at the close of the academic year.

MISS THOMPSON TOURS NEW ENGLAND - WHAT SHE DID NOT SEE.

Miss Maude Thompson, Plant Quarantine Inspector, has just returned to the Washington Office from several weeks vacation in New England. While she was not particularly looking for blister rust and posters and signs relating to the work, she kept this in mind. The only place where a blister rust poster was seen was in the pine woods in the girls' camp at Wells Beach, Maine.

A sight-seeing tour was made from Boston to Bretton Woods via Rye Beach, Portsmouth and the Merrimack Valley, returning via Franconia Notch, Lake Winnepesaukee, Concord and Nashua. On the whole trip Miss Thompson did not recall seeing a single blister rust poster or demonstration sign.

A PIPE'S A PAL, and

YOUR FUTURE IS YOUR OWN MAKING -- (Palm Olive)

were two signs which did attract Miss Thompson's attention. Advertised so frequently and so insistently - everybody saw and remembered them. Tourists, I believe, would appreciate seeing a bright-colored blister rust control poster once-in-a-while.

PUBLICATIONS

Blister Rust:

Anon. White Pines Doomed. Blister Rust and Weevil Serious Enemy to White Pine.

Jørstad (I.). Beretning om plantesykdommer i land og havebruget 1920-22. II. Frukttraer og baervekster. (Report on plant diseases in agriculture and horticulture 1920-22. II. Fruit trees and small fruits.)- Christiania, Grøndahl & Søn's Boktrykkeri, 73pp., 22 figs., 1923.

Cronartium ribicola, which is found on black currants wherever the Weymouth pine (*Pinus strobus*) is grown, can be eradicated only by felling the trees within a radius of several hundred yards. *P. flexilis* and *P. cembra* appear to be less susceptible.

Editor: This shows the relative value of the black currants and white pine in Sweden; the black currants being the preferred plant.

Stanford, Ernest Elwood. A Matter of Eradication. The Forward, Vol. 43, No. 30, p. 237-238, June 26, 1924. Phila. Pa. Presbyterian Sunday School Paper for Young People.

Forestry

Illick, Joseph S. The Boy Scouts. First Book of Forestry. Cir. 20, Rev. 1920, of Penn. Dept. of Forestry. This book would be very valuable to any blister rust control agents working with Boy Scouts or similar organizations.

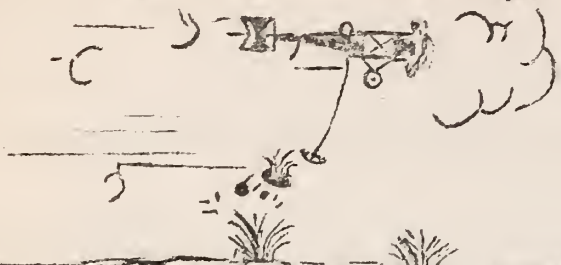
Exchanges

The Observer - mimeographed News Letter of the New York Conservation Commission has just been received. A good newsy sheet which keeps us in touch with each other - all being interested in the one end -- forest conservation and production.

The News Letter of the New Hampshire Forestry Department is now in its sixth number. We are glad to receive the News Letter and frequently get dope from it which we pass on.

The Forest Worker is a mimeographed bi-monthly publication of the U. S. Forest Service. Volume 7, No. 1, appeared Sept. 1924. This is the best thing the Service has put out, to keep workers in touch with each other throughout the broad field of forestry. Members of the Office of Blister Rust Control are being put on the mailing list for the Forest Worker.

ON THE FIRING LINE



WITH

Ribee Bill

Having just returned from two round trips thru Rhode Island and Connecticut, I feel much indebted to Mr. Filley, Andy Anderson, and their assistants, for their services as guides. The personally conducted tour was "different," so interesting that I took it twice, and furnished me with a survey of many points of forestry and blister rust interest in Southern New England that will be valuable for future reference.

This here Blister Rust is sure getting advertised in some sections. Now, in Warrensburgh, N. Y., there is a black cat called "Blister Rust" that recently gave birth to a couple kittens. They were promptly named "Currant" and "Ccoseberry".

In some sections, the visitor who hasn't even an inkling of what Blister Rust means, often furnishes the locals with amusing reactions. There is speculation among some of the visitors at the roadside demonstration area near Pottersville, N. Y., as to what Blister Rust is. A fellow from West Virginia told Dr. York that he saw a sign reading "Stop! Blister Rust Ahead", and sure stepped on the gas for the next mile. Evidently that fellow always does the opposite or else doesn't believe in signs. What is the psychology of that, Conners?

But Then, He Was From New York City.

A recent arrival from the City, out for a vacation in the "woods", seated himself for breakfast at the Blister Rust boarding house. The only other person at the table was the Home Demonstration Agent, who sought to make conversation after the weather topic was politely exhausted, with the inquiry:

"Are you working for the Blister Rust?"

Innocently and sincerely, the new arrival replied that he had not met that chap yet; and was only up on a vacation.



BLISTER RUST NEWS



OCT 1 5 1924

U.S. DEPARTMENT of AGRICULTURE
Office of Blister Rust Control.

C O N T E N T S - VOL. 8. No. 8.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry
Washington, D. C.

THE BLISTER RUST NEWS

Issued by the Office of Blister Rust Control,
and the Cooperating States.

Vol. 8, No. 8

October 15, 1924.

Hello Agent!

Now that eradication work is over for the year, the open season for plans and reports is on.

The response to the open letter requesting dope on plans for the winter resulted in just one plan - Curtis's which is given prominence as the first article in this News Letter. Hats off to you, Curtis!!

Now Honest Injun, Agents, aren't there any more plans that have been writ out in black and white? Do you know in your head so exactly what you're going to do for the next six months that you don't need a written plan? I ha'e me doots about it, as Harry Lauder might say.

* * * * *

Many a Ribes bush has bit the dust this season. They can't bite it too soon either, for pines are dying from the rust right along. In this fight for the Pine, it is a life for a life. Why, no - it is one Ribes bush killed to 20 or 40 Pines saved, for Ribes average less than 100 to the acre, while pine stands vary from 300 to 3000 per acre.

* * * * *

By the way, Agent, were you able to use other cooperative agencies this year in Ribes eradication, or were all the Ribes pulled in your District the result of your own unaided effort? If the latter is true, you are to be complimented on getting so much acreage protected. However, sposin' you'd had your neighbors pullin' for you in every town, wouldn't that have protected a whole lot more pine -- How about it, Boy?

Yours to the last bush,

Ribes Bill

PLAN FOR WINTER WORK IN OXFORD COUNTY, MAINE.

For the winter season of 1924 and 1925, starting about the fifth of December, we have twenty-five meetings scheduled, lasting through December and January.

At these meetings we are going to use slides made from local views in this County, about fifty in number, showing damage by Blister Rust, pine plantations, nurseries, lumbering in its different branches, sawmills, woodworking plants, pine stands of different ages, of natural reproduction, log driving, water storage, showing the value of our tourist business, such^{as} /boys' and girls' camps, summer hotels, etc. With local views, I expect large attendance at our meetings.

After the windup of these meetings the balance of the winter will be spent in visiting the different towns in the County.

Talks with the Selectmen in each town and some of the pine owners in order to thoroughly explain the blister rust situation prior to town-meetings. On the day after town-meeting, we in Maine know by the amount of money appropriated for blister rust control whether our winter's work has been a success or failure.

D.S. Curtis.

EXHIBIT FOR UNIVERSITY OF MAINE.

A three-wing panel exhibit has been prepared and forwarded to Prof. John M. Briscoe, Forestry Department, University of Maine, at Orono, at the request of Mr. Filler.

CAN YOU BEAT IT?

Only three bushes found on a 20 acre lot eradicated six years ago!

"Here's a bouquet or two to the individual who handled the Blister Rust Crew in Littleton in 1918. We don't know the party but we're keen on complimenting him, whoever he may be. Chanced to inspect the lot of Judge Grey of this town who figured he needed re-eradication of currants and gooseberries on his pine lot. Over an area of twenty acres that was gridironed very carefully, we found just three gooseberry bushes. Now, you fellows who hear a lot of criticism of the work should mention this and refer the parties to Judge Grey. He is our champion and will either sentence the culprits or administer a severe tongue lashing."

Thos. L. Kane, Agent, Woodsville, N.H.

(Extract from N.H. Forestry News Letter, September 1924).

Edit: This news from Kane is one of the most important items I have seen lately concerning blister rust control. The news is thrilling. Did you get the meat in the above? - Here's a pine lot of 20 acres worked six years ago. Today only three gooseberry bushes were found on the whole area. Boy! I'll say that the crew foreman and crew who worked the area in 1918 ought to have leather medals. As an effective argument for the practicability of control the above can't be beat.

NEW MAP PREPARED BY THE FOREST SERVICE

A map of the Forest Regions of the United States, listing the principal trees of each region, has just been released.

This map is 18 x 24 inches. It may be secured by writing direct to The Forester, Washington, D.C.

EUROPEAN BLACK CURRANTS AND WILD BLACK CURRANTS - HOW TO
DISTINGUISH BETWEEN THESE TWO SPECIES.

Both the black currants, Ribes nigrum L. and Ribes americanum, Mill. (synonym R. floridum L'Her.) are frequently cultivated in the eastern states. Absolute identification is at times very desirable, on account of the ban which various states have placed upon Ribes nigrum, which is known to be the species most susceptible to the white pine blister rust.

The stem character has been frequently found to be a good one in determining species; R. americanum having a ridged or angular stem, while R. nigrum has a more or less smooth round stem.

The best character however, where leaves are concerned, is the position of the resinous dots. These resinous dots or glands appear only on the under side of the leaves of Ribes nigrum, while they appear on both sides of the leaves of Ribes americanum. On the latter species they may be very numerous or even as few as five on an entire leaf. Resinous dots have been found, however, on the upper leaf surface of all of the 750 leaves of this species, collected from a dozen different states and from many localities in these states. The dots vary in color from a clear dark amber shade to a clear light yellow. A hand-lens with a magnification of 10 diameters was used in the examination of these leaves.

R.G. Pierce and W. Schnell.

FORESTRY FIELD MEETING TO BE HELD

IN NOTTINGHAM.

A county-wide Forestry Field Meeting is to be held Saturday, October 25th at 1:30 P.M. on the farm of Mr. Arthur Gerrish in Nottingham on the Epping Road. Follow the arrows pointing to the FORESTRY FIELD MEETING.

This meeting offers an opportunity to visit one of the best natural pine reproduction areas in Rockingham County and to see the results of a heavy blister rust infection. Plans are under-way to have the following speakers at the meeting: John H. Foster, State Forester; L.R. Newman, State Blister Rust Agent; and Mr. Emerson, President of the Rockingham County Farm Bureau. It is urged of every citizen of Rockingham County to be at this meeting and learn why so much stress is being placed upon the dangers of the Blister Rust Disease; why nearly every tree along the highways shows a fire poster and why you are urged to care for your woodlot. Town selectmen and forest fire wardens are especially urged to attend this meeting. It is your chance to get together and talk these problems over.

SATURDAY, OCTOBER 25

ALL ROADS LEAD TO NOTTINGHAM. FOLLOW THE ARROW.

K.E. Barraclough, Blister Rust Agent,
Rockingham County.

NEW HAMPSHIRE AGENT USES UP-TO-DATE

EXTENSION METHODS.

Mr. J.S. Morrison who is the town forestry project leader in Bridgewater has been practicing good forestry by taking the hardwoods out of the pine and by taking out only the largest pines when he sells or needs lumber.

The Blister Rust Agent is anxious to have a forestry project leader in every town of his district and asks that the readers cooperate with him in this work. Is there a forestry project leader in your town? If not, who do you think would be the man for it? Write the Agent if you have any one in mind as he will be glad to go over the matter with you.

While inspecting a pine lot recently, the owner told me that his father had mowed the place over 25 years before. Today, this same lot of approximately eight acres is value at not less than \$500. Needless to say, he has removed all currant and gooseberry bushes in or near the lot as he feels it is the only safe way to protect them from Blister Rust which is so common in Southern Grafton County.

Geo. H. Richardson, Agent, Lebanon, N.H.

(Extract from N.H. Forestry News Letter, September 1924)

POINTS WHICH SHOULD BE EMPHASIZED IN SELLING BLISTER RUST
CONTROL TO AN INDIVIDUAL (AS DETERMINED AT AGENTS CONFERENCE
HELD IN N.H., APRIL, 1923).

1. State that blister rust control work is conducted by the State Department of _____ in cooperation with the United States Department of Agriculture, and that the blister rust control agent has charge of this work in the county.
2. Get advance information if possible regarding person to be interviewed; man's name; if owner of pine woodlot, etc.
3. Send preliminary personal letter letting owner know you are to call.
4. Avoid use of technical terms; if used, explain meaning.

5. Emphasize damage to pine.
6. Mention of flags, dying of needles, pale yellow discoloration of bark, swelling, blisters-April-June.
7. Emphasize that disease girdles tree.
8. Emphasize white pine cannot be grown in Europe. (Kaiser passed an edict prohibiting planting of white pine in imperial forests of Germany).
9. Make clear why Blister Rust is called a rust-(rusty appearance on Ribes)
10. Emphasize destroying bushes, pull up by roots and hang up in trees.
11. Use standard distance of 900 feet as width of Ribes free protective zone.
12. Make clear where Blister Rust came from and how.
13. Emphasize how spores are distributed.
14. Cite examples of pine value.

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A POOR APPROACH.

An insurance salesman recently called on us at Washington. We let him talk because we were looking for points for your use in the field when you "sell" blister rust control to a man.

He wasted our time, and it's valuable too, unless the things he did and shouldn't have done are passed on to you for your help.

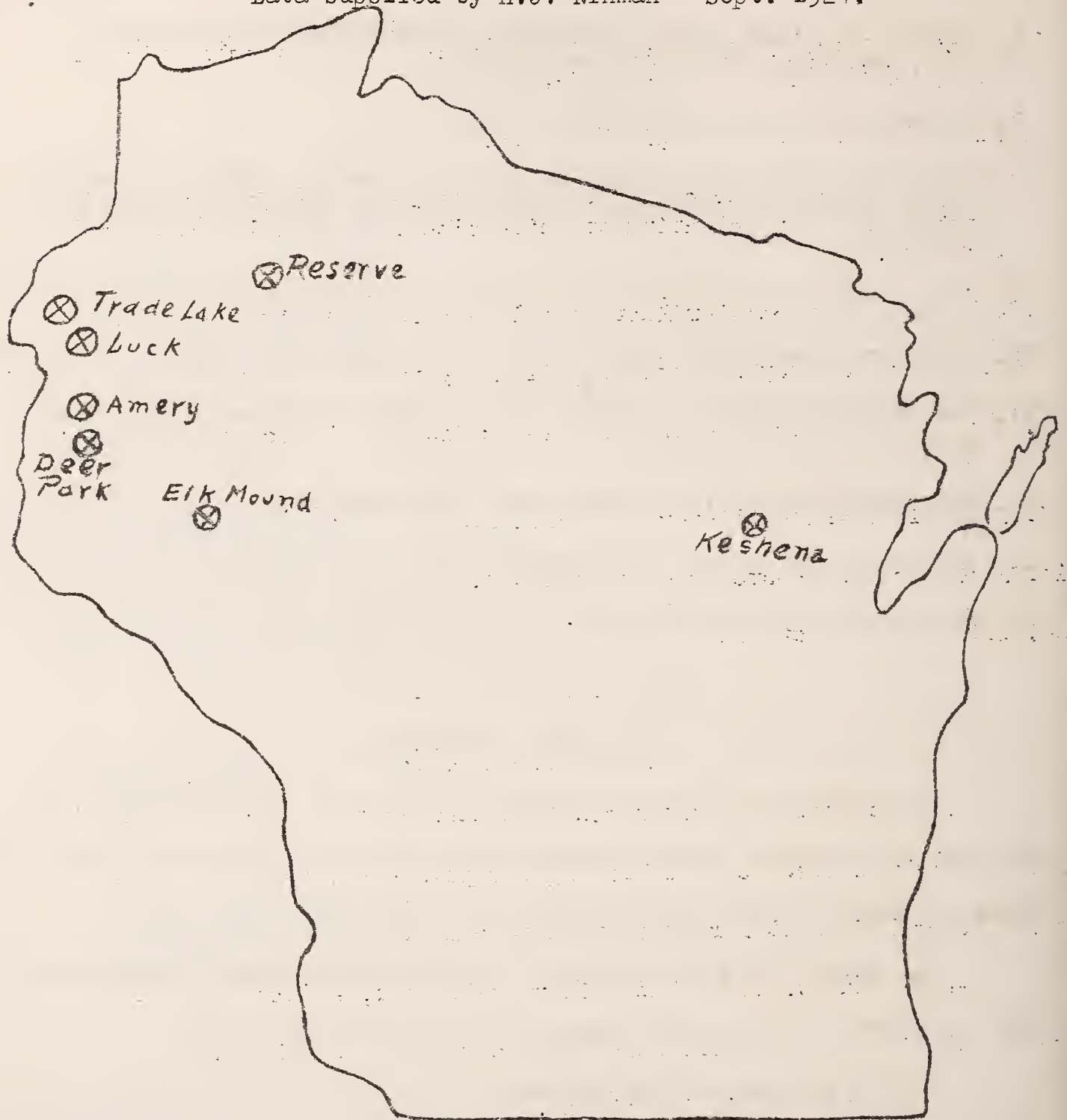
- 1 - He overstayed his welcome.
- 2 - He argued the case of the value of his policy.
- 3 - He talked too long at one time, and too rapidly. Better to have established confidence by short visits.
- 4 - He wasn't willing that we should consult others before buying, or take a little time to think over the proposition. Men who succeed do not buy on snap judgment, or on specious argument, but only after deliberation.
- 5 - He went away mad, which left a poor impression.

R.G. Pierce.

MAP OF WISCONSIN

SHOWING LOCATION OF BLISTER RUST INFECTIONS IN 1924.

Data supplied by H.J. Ninman - Sept. 1924.



WISCONSIN BLISTER RUST SITUATION.

Mr. H.J. Ninman has recently made a summary concerning blister rust infection in Wisconsin, as follows:

"The pine on the Menomonie Reservation in Shawano County is well known. However, it was not generally known that Ribes are fairly abundant in one of the best stands about three miles south of Neopit. At Keshena I found six *R. cynosbati* infected on St. Joseph's Hill, within 15 rods of where the infection was most abundant in 1919. Four of these bushes were large and were missed by the crews who eradicated these. Two of the bushes infected were probably seedlings in 1919. Over most of the area eradicated in 1919 and 1920 there are now enough bushes that second eradication should not be delayed much longer. One infected bush was found across the road east of the Government school where I found one infected bush in 1920. Just west across the road from the nursery one mile north of Keshena, I found an abundance of Ribes. Mr. Floyd O. Grapp, who is in charge of the nursery, was with me on nearly all of my trips through the woods about Keshena. I found no infection east of Neopit on the Evergreen River.

At Trout Lake I found a considerable number of Skunk Currants within a quarter of a mile from the nursery near the saw mill. Otherwise, conditions were good up there. No infection was found.

I found considerable white pine in the lake region east of Trout Lake, especially around Sayner and Plum Lake in Vilas County. I did not have time to look over much of this region. No infection was found.

At Reserve, on the Court Oreilles reservation I found two infected *R. cynosbati* in the identical place where I found one bush last year. This place is within 1/8 of a mile from where pine and Ribes were eradicated in 1921.

At Elk Mound, eight miles west of Eau Claire, Wm. Thompson and I six weeks ago found six pine infections and about a dozen infections on small Ribes bushes.

Last Saturday I found heavy Ribes infection on the Range property and on the C.A. Goodrich property near Deer Park, St. Croix Co. Only a few white pine trees remain on the former and none on the latter property. Adjacent properties, owned by C.O. Olson and Julius Neitge, have been "freed" of Ribes. This region is now the most dangerous in Wisconsin.

I have not as yet visited the Grantsburg area, nor the Luck area, but do not expect to find anything excepting possibly scattered Ribes infection. Am going to these places this week.

North of Amery, southeast of Lykens, I found three or four infected *R. cynosbati* which were missed while eradicating. Also found one infected pine twig there.

Note: See map on the accompanying page showing the location of infections.

HOW MINDS WORK.

"Let two men engage in a political argument. Seldom is either convinced. On the contrary, each goes away more than ever certain that he, himself, is right.

Women consider such arguing a weakness of men. Their belief that it is futile is correct. Why this is, so is explained by the French psychologist, Gustave Le Bon.

He says the convictions of an electorate are not created by reasoning or argument. But by four other methods. These are: Affirmation, repetition, contagion, prestige.

One person, simply by affirming his opinion does influence another. The simpler and more concise his declaration the greater its influence. Repetition of an opinion on many occasions makes it more convincing. This is well known to all experienced writers of advertisements.

A person tends to be convinced by the fact that many about him hold an opinion. It is a form of imitation. But imitation must be easy. The thought must be easily grasped. That's why ideas which seem strange win little support, and those who present them are said to be "in advance of their times."

Prestige, the fourth influence, is sometimes personal, sometimes acquired. Many classic books have such prestige. They are thought to be fine, even by persons who, if they attempted to read them in this day, would be bored. The moment the merit of a person or idea seems questionable the prestige is lost.

Many have used all this as an argument against popular government. That argument is false. For the political convictions of the most highly educated are formed in exactly the same way as the convictions of the uneducated, says Le Bon."

Editorial - Daily Paper.

If the above is true, and we must admit that it is, what an opportunity is open for the Blister Rust Agents to achieve good results by a little foresight and systematic thinking!

Consider for a moment how great a part convention plays in our lives: we do such and such a thing, accept such and such a theory simply

because those in whom we have confidence, have done so. Human nature is the same the world over and we are forced to agree with Gustave Le Bon when he tells us that our convictions are made up by these four methods: affirmation, repetition, contagion and prestige, rather than by actual reasoning.

By applying a few elements of psychology, the Agent's work could be greatly simplified and would, at the same time, yield more gratifying results. His first and most important step is to win the confidence of those with whom he is working; when this is done the rest should come easy.

The Agent, because of his position, is considered a leader in the community and here his opportunity lies. By affirming his opinions and by his repetition of these opinions, his teachings are usually readily accepted. The circle widens, and he again has the advantage; - if his theories are accepted by a few influential people of the community they will soon be accepted by many. A certain amount of prestige also goes with each Agent -- he is supposed to know and, to a great extent, "what he says, goes". Why cannot these factors (or advantages) be harnessed into working shape so that they will pull the greater part of the Agent's load?

Remember that psychology deals alike with the uneducated and the most highly educated -- no one escapes its influence. By a greater use of its methods, greater things can be accomplished.

N. Schnell - Washington.

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The New York State Blister Rust Agents' Conference was held in Albany during the week of October 20.

STATE BLISTER RUST LEADERS' MEETING.

Under date of September 29, a memorandum has appeared concerning the State Leaders' Meeting at the Cheswick Inn, Littleton, N.H., October 13th and 14th. The program was informal consisting of:

Discussion of field problems

Field trips

Infection areas --Littleton, N.H.
Infection areas --Waterford, Vt.
White Mt. National Forest.
Brown Lumber Company

Talks

J.H. Foster, State Forester Mountain
I.T. Yarnall, Supervisor, White / National Forest.

At the time this News Letter goes to press, nothing definite has been received concerning the outcome of this meeting.

NEW MOTION PICTURE BEING FILMED.

Mr. F. L. Goll, in charge of Motion Pictures for the Bureau of Plant Industry, Mr. R. Green, Director, and Mr. Corliss Cramer, Photographer, both from the Office of Motion Pictures, left Washington during week of October 13th to 18th to film the new scenario, "THE PINES", which has met the approval of the "powers that be".

Edit: Here's hoping the weather continues mild, and that the Ribes leaves hang on long enough to be shot. It is rumored that several prominent members of the Blister Rust Control family will be actors in this new screen drama.

E X H I B I T S

A Blister Rust exhibit has recently been sent Prof. H.W. Browning of the Botany Department of Rhode Island*College, at Kingston, Rhode Island, consisting of dried specimens of the rust on pine, specimens with aecia preserved in glycerin-formalin solution, as well as the rust on various species of currants and gooseberries.

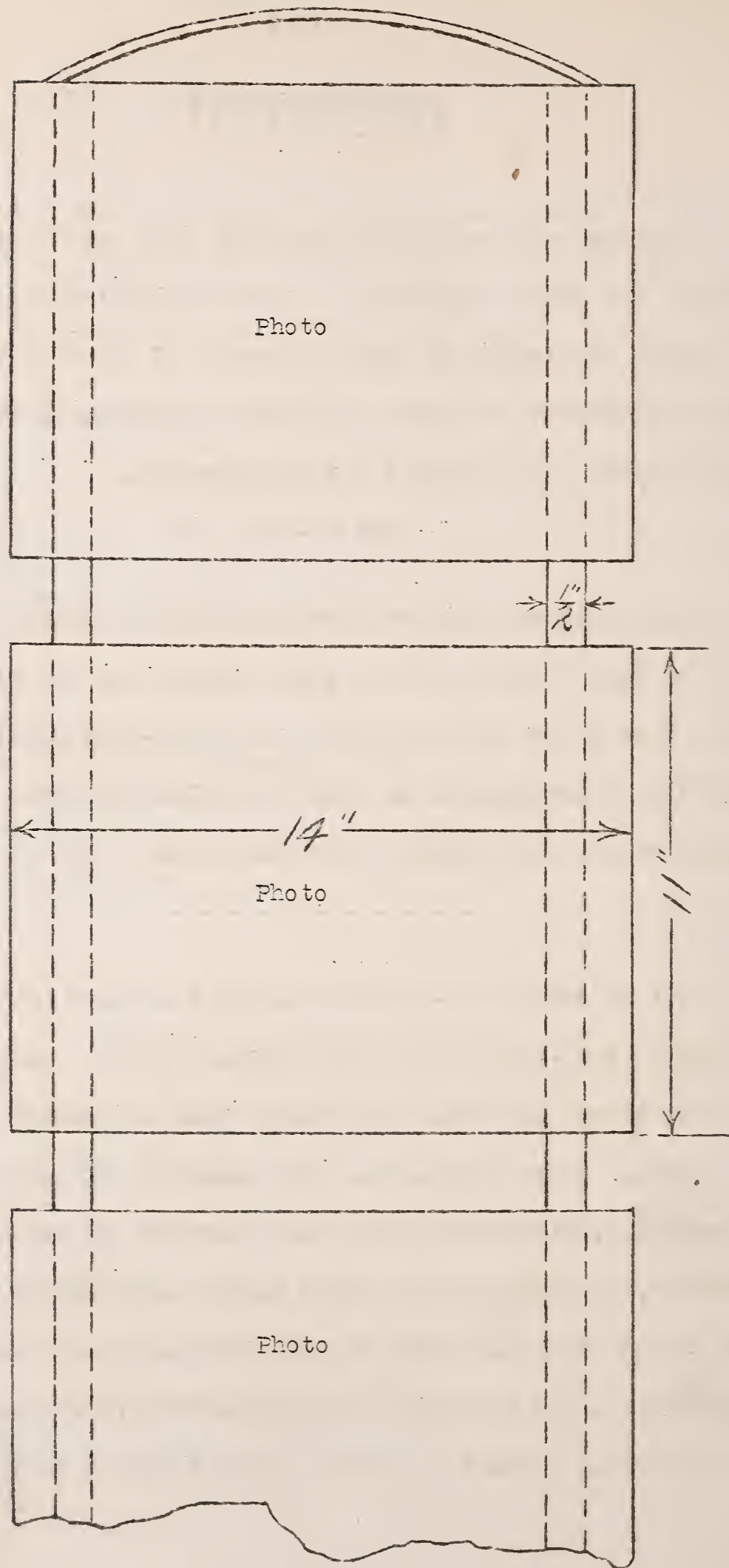
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A rush call was received from Mr. Thos. W. Skuce, Extension Forester of West Virginia, for a small exhibit for the Kanawha Exposition and State Four H Fair at Charleston, so a five-wing panel was sent. The desirability of getting rid of cultivated black currants was stressed in the illustrations and subject matter contained in the panel.

- - - - -

A set of seven five-wing panels has been sent Mr. Wyckoff for use in the West. Each panel is 17 x 26 inches in size. Several colored reproductions of Mr. Steadman's paintings (made at Kittery Point, Maine) were included. A new wrinkle has been added to this exhibit. Two of the wings pertain particularly to the black currant and its eradication. There are, however, localities where black currant eradication is not the main feature of the work, and where it might be poor policy to show these wings. For that reason, the two wings were fitted with removable inserts of compo-board which could be used in showing other features of the Western work.

TRAVELING PHOTOGRAPHIC EXHIBIT



The U.S. Forest Service has used successfully a set of photographs showing various activities of the Service; the photographs being hung one below the other by means of a cloth tape, as indicated on preceding page. The prints are mounted on regular heavy photo mount board.

They have a number of different sets, as one on fire protection, another on silviculture, and one on lumbering, etc. A fairly complete description is mounted beneath each photograph.

A set of four 8" x 10" photographs on 11" x 14" mount board would cover a space about four feet long by 14 inches in width. Two sets of four prints each might be used to cover the blister rust story.

Do you need materials for this kind of blister rust exhibits?

The Washington Office may assist you in the following ways.

- 1 - The sets may be made from available photographs in Washington Office and sent to the field men upon request.
- 2 - The unmounted photo board fastened together by tape, may be prepared in Washington and field men paste on such photos and lettering as they choose.
- 3 - The field men may designate the photographs and lettering which they desire made into exhibits and the Washington Office will make them up as per request.

STATISTICAL SECTION

STATISTICS ON 5-NEEDED PINES

Table 1.

Present Stand of Commercial 5-needled pines in United States

<u>Location</u>	<u>Species</u>	<u>Amount</u> *	<u>Value</u>
¹ Eastern States	White pine	15.5 billion bd.ft.	\$206,150,000
² Lake States	" "	6 " "	79,800,000
³ Western States	Western White Pine	22 " "	110,000,000
California & Oregon	Sugar Pine	38.5 " "	154,000,000
	Total	82 " "	\$549,950,000

* Estimated by Forest Service - February 21, 1921, and March 1, 1922.

Note: Authority for above statistics \$13.50 stumpage value of white pine Eastern States is taken from a chart in Forest Service, article in Year-book 1922, Timber: Mine or Crop? on page 146: \$13.00 stumpage for white pine in Lake States is also taken from the same chart. The stumpage values of \$5.00 for western white pine and \$4.00 for sugar pine were given R. G. Pierce personally by Mr. J. F. Preston of the Forest Service, Oct. 1, 1924

Table II.

The average value of Commercial 5-needled Pine Timber in the United States 1922-1923.

<u>Species</u>	<u>Stumpage</u>	<u>Value per M board feet**</u> Lumber f.o.b. mill
White pine	\$13.30	\$36.37
Western white pine	5.00	48.85
Sugar pine	4.00	43.78

**Note: The average price of white pine lumber f.o.b. mill \$36.37 is taken from the Bureau of the Census Bulletin on Forest Production 1922 -Lumber, Lath and Shingles, Table 35, Page 24. The average lumber value for sugar

pine f.o.b. mill is also taken from the same census bulletin as the preceding. The average value of Western white pine lumber f.o.b. mill, not being found in the census bulletin, was given to Mr. Pierce personally by Pr. Preston, U.S. Forest Service, as being the average in 1923, for the Spokane district.

* The present stand of eastern white pine given as 21.5 billion and sugar pine 38.5 billion does not agree with the figures given by Hoffman, Director of Wind River Forest Experiment Station, in an article "White Pine Blister Rust", appearing in the TIMBERMAN, March 1, 1922. Hoffman gives the figures on standing timber as follows:

Western white pine	22,055 million board feet			
Eastern white pine	23,500	"	"	"
Sugar pine	41,800	"	"	"

Edit. -The figure 23,500 probably includes 2 billion feet of Norway pine, frequently estimated with white pine, so that figures in Table 2 and Hoffman's figures agree.

¹N.E., N.Y., Pa., Md., W.Va., N.C., Ky., Tenn., Ga.

²Minnesota, Wisconsin, Michigan.

³Montana, Idaho, Washington, Oregon, California.

BLISTER RUST CONTROL WORK IN THE NORTHEASTERN STATES.

RISES ERADICATION SUMMARY 1918 - 1923.

STATE	YEAR - 1918					YEAR - 1919				
	No. Ribes		Per Acre		TOTAL COST	No. Ribes		TOTAL COST		Per Acre
	Acres	Cult. Wild	Cost	No. Ribes		Acres	Cult. Wild	Cost	No. Ribes	
Maine	4910	235 91862	1.05	18.70	5179.23	9216	--	333775	6136.10	.666 36.20
Vermont	4698	77 78563	1.10	16.80	5182.64	2460	--	96749	2214.26	.90 39.32
R. Island	12715	492 13927	.28	1.09	3527.97	40411	1657	45320	5609.74	.14 1.12
Conn.	800	-- 10000	--	12.50	Private Funds	2500	0	31000	2323.34	.93 12.40
New Hamp.	66292	8427 959315	.39	14.47	26013.89	163413	21171	1659936	32988.35	.20 10.15
Mass.	18706	1919 356067	.84	19.03	15805.31	10849	2374	201882	8156.18	.75 18.60
New York	29337	11000 904153	1.43	30.81	43679.16	23194	2675	2181286	79689.08	3.43 94.04
N.Eng.&N.Y.	137458	22150 2413887	.72	18.8	99388.20	252043	27877	4549948	137117.05	.54 18.2

-18-

STATE	YEAR - 1920					YEAR - 1921				
	No. Ribes		Per Acre		TOTAL COST	No. Ribes		TOTAL COST		Per Acre
	Acres	Cult. Wild	Cost	No. Ribes		Acres	Cult. Wild	Cost	No. Ribes	
Maine	10283	636 176788	.486	17.19	4994.05	156221	708	56304	3398.76	.022 .36
Vermont	4501	74 36294	.75	8.06	3391.60	6319	131	60537	3464.01	.548 9.58
R. Island	23164	1550 5973	.16	.26	3796.92	26971	552	16022	3826.92	.142 .59
Conn.	2170	2 42793	.91	19.72	1974.70	8000	6	41470	2664.07	.33 5.18
New Hamp.	204093	22206 2061996	.175	10.10	35864.48	137827	9713	1654443	21873.07	.159 12.00
Mass.	19389	1421 1224306	.54	63.14	10422.87	32933	4631	632618	10290.54	.313 19.20
New York	7057	47 695833	3.46	98.60	24399.18	8474	14	730573	22576.33	2.66 86.31
N.Eng.&N.Y.	270657	25936 4243983	.31	15.8	84843.80	376745	15755	3191967	68093.70	.18 8.5

BLISTER RUST CONTROL WORK IN THE NORTHEASTERN STATES (Cont'd)

Ribes Eradication Summary 1918-1923.

State	Year - 1922						Year - 1923					
	Acres	Number Ribes		Total cost	Per acre		Acres	Number Ribes		Total cost	Per acre	
		Cult.	Wild.		Cost	Ribes		Cult.	Wild		Cost	Ribes
Maine	190209	3688	449287	8012.48	.042	2.3	336452	12095	1209232	19333.16	.057	3.6
Vermont	13512	812	201006	6150.24	.455	15.0	25190	1234	278570	8498.43	.337	11.0
R. Island	11500	132	11764	1840.00	.160	1.02	31308	1464	14275	1895.96	.06	0.45
Connecticut	6175	0	137501	4651.50	.733	22.2	14062	248	288333	6863.14	.488	20.5
N. Hampshire	179293	9061	1315829	23706.64	.159	10.0	268257	24779	3496733	51651.48	.192	13.3
Mass.	64302	2368	1578294	15375.09	.208	24.5	201931	14881	1776107	28411.92	.14	7.8
New York	11030	0	654231	34082.42	3.09	59.3	15459	367	906617	44229.78	2.87	57.3
N. Eng. & N.Y.	476621	16061	4849812	96813.37	.20	10.7	892639	55074	7969917	160883.87	.18	9.0

1
19
1

Totals (1918-1923)

	Acres	Number		Total cost	Per	
		Cult.	Wild		Cost	Ribes
Maine	707291	17362	2317298	47053.78	.067	3.3
Vermont	56680	2328	752619	28901.18	.599	13.3
R. Island	146069	5847	107281	20497.51	.14	0.77
Connecticut	33707	256	551097	18476.75	.543	16.4
N. Hampshire	1019755	95357	11649252	197097.91	.187	11.5
Mass.	348110	27600	5769274	86461.91	.248	16.7
New York	94551	14103	6072693	248655.95	2.63	64.4
N.Eng. & N.Y.	2406163	162853	27219514	647144.99	.269	11.4

U. S. Department of Agriculture

Office of Blister Rust Control

August 1924

Data compiled by

E. C. Filler.

WHEN WHITE PINE "COMES BACK"
AND WHEN IT WON'T.

Missoula, Mont. -- The vast burned-over forest areas of northern Idaho afford an excellent opportunity to study the reaction of western white pine to fire. Studies by the Priest River Forest Experiment Station at the head of the Coeur d'Alene River have recently been made in a tract of 100,000 acres burned successively in 1870, 1889, 1910, 1919, and 1923, several of the burns overlapping and affording examples of the effect on the forest of double burns.

Tests and observations show that western white pine will renew itself satisfactorily on reasonably moist areas that have been burned once only. In such cases the majority of the young seedlings come in three to seven years after the date of the burn, owing to the slow process of germination and the fact that pine seed in the duff or stored by rodents remains viable for several years. Artificial planting, must, however, be practiced on lands burned over twice, if satisfactory new growth is to be obtained in less than 40 or 50 years. The Experiment Station reports no single instance under their observation where a desirable natural reproduction has come in on these double burns. The second burn has in every instance wiped out practically all possibility of new growth. These findings are considered important for direction of all planting activity on burned-over white pine lands.

Q U A R A N T I N E S

Four men are engaged in inspecting plant shipments in transit for violations of Blister Rust Quarantines, at points along the Mississippi Valley line as follows:

Mr. R. A. Sheals and Mr. O. C. Anderson are at St. Paul, Minnesota, Mr. H.J. Ninman is back at Omaha, and Mr. Hodgins is at his old stamping ground, Kansas City. Only one violation has been reported to date (October 21, 1924)

A number of men are engaged in quarantine inspection at western points, but so far we have no word from them concerning their work.

P O R T I N S P E C T O R O N T H E J O B

A port inspector at Boston, recently took from a passenger, coming from Prince Edward Island, several bushes of the cultivated black currant, *Ribes nigrum*. The leaves were infected with rust identified in the Washington Office as *Cronartium ribicola*, the white pine blister rust.

Edit: - Just as if we needed any more infections to keep us busy.

P L A N T Q U A R A N T I N E C O N F E R E N C E A T W A S H I N G T O N .

The Conference on Federal Plant Quarantine #26 which was held in Washington on September 26, had a large attendance of blister rust control workers. Among those present were A.W. McCallum, of Ottawa, Dr. G.P. Clinton, Dr. A.W. Gilbert, Dr. G.G. Atwood, C.R. Pettis, Dr. H.H. York, R.A. Sheals, S.B. Detwiler, Dr. J.F. Martin, R.G. Pierce, G.B. Posey, Dr. Perley Spaulding, and M. A. Thompson. The decision of the Federal Horticultural Board relative to proposed changes in the quarantine have not yet been announced.

PERSONAL

District of Columbia

Dow V. Baxter who has been in the employ of the Office, off and on, from 1918 to 1923 inclusive, in the summer time, was a recent visitor at the Washington Office. He is joining the staff of the Botanical Department of the University of Wisconsin, as Instructor.

Mr. Robert S. Caruthers has been appointed as Collaborator, effective October 1, to assist in compiling, analyzing, and preparing for publication, the results of his field study during the past summer.

Mr. S.B. Detwiler returned Sept. 24th, from a field trip into New York, Vermont, New Hampshire, and Massachusetts. Mr. Detwiler was particularly impressed with the fact that more eradication work was done, and in a shorter working period than in any previous year.

Mr. Elmer R. Ford who has been associated with the Office for several years as Assistant Pathologist, resigned September 30 to accept an appointment as Valuation Engineer in the Treasury Department (Income Tax Unit, Timber Section). Nothing like a Ford for climbing. Good luck to you in your new work.

Dr. James F. Martin, left Washington in the early days of October for a field trip covering the Northeastern and Lake States. He plans to be in the field the entire month of October. He attended the State Leaders' Meeting in Littleton, on October 13 and 14.

Maine

Mr. Louis M. Rollins finished his work with the Office as Agent, on September 15.

Massachusetts

Wm. Clave, Ralph O. Gould and Ronald B. Craig have been appointed as Agents, effective October 20, 1924.

New York

Professor Burr H. Prentice resigned as Agent on Sept. 8 to renew his work in the Forestry Department of Purdue University.

Mr. A.F. Amadon, State Leader in New York, announces the arrival of a 7-1/2 pound boy at the Amadon household. --(Another Ribes hound)

Rhode Island

Mr. O. C. Anderson and Miss Gratia Constance Britcher, of Syracuse, New York, were married October 4, 1924. Congratulations Andy!

Vermont

Mr. Floyd M. Callward, of Vermont, and Miss Fern Fuller of Rochester, N.Y. were married September 24th. After a week's honeymoon in New York and Vermont they will make their home at Montpelier, Vermont. Congratulations are in order.

Washington

The following men were appointed as Field Assistants between October 1 and 10; Messrs A.G. Darwin, Cecil H. Hatton, Percy E. Melis, Carl O. Peterson, Jack W. Rodner, Guy J. Scholl, Philip S. Simcoe, Clarence C. Strong. Messrs. Hatton, Melis, Peterson, Scholl and Simcoe have already received their Quarantine Inspectors' cards.

P U B L I C A T I O N S

Western White Pine

Behre, C.E. Prediction of yields of young western white pine timber in Idaho. The Idaho Forester 1924. Vol. 6, pg. 32-36.

Preston, Jno.F. Forest Practice and Possibilities in North Idaho, Reprinted from The Timberman, May 1924 - 4 pages.

- - What will be the stumpage prices of North Idaho lumber 20 or 40 years hence? No man can say with authority. We do know that very low grade second-growth white pine in New England is worth now more than virgin timber in Idaho. Stuff that is worth nothing in Idaho brings \$15 or more on the stump in New England; and timber that is worth \$10 in Idaho brings (where it exists) \$50 or \$60 in Pennsylvania, New York or New England. One thing seems certain: there will be in 20 years (and probably less time) no species which will have to be logged at a loss. All species will show some value.

Edit: A very readable article, especially interesting to those working with western white pine.

Wheaton, R.G. The Stimulation in Growth of Western White Pine Remaining on Areas After Logging.- The Idaho Forester 1924 - Vol. VI Pg. 37-39.

MATERIAL HELPS FOR THE AGENT'S LIBRARY.

Any of the following may be secured from the Office of Blister Rust Control, Washington, D.C., as long as the supply lasts.

B L I S T E R R U S T

Damage - Mimeographed sheet on damage to pine at Schroon River, New York.

Effectiveness of Control

Mimeographed sheet.	Hayden Estate, Lake George, New York.
" "	Bullis and the Cross Pasture at Lewis.
" "	Control in Norfolk, Connecticut.
" "	Control at Kittery Point, Maine.

Motion Pictures - Titles and subtitles of the following 6 reels -
Mimeographed.

Reel 1.	The Story of White Pine --	Approximately 1,100 ft.
" 2.	Logging Eastern White Pine	" 1,000 "
" 3.	Nature's Crop of White Pine	" 1,000 "
" 4.	White Pine - The Wood of Woods	" 1,000 "
" 5.	White Pine - A Paying Crop for Idle Lands	1,000 "
" 6.	White Pine - Beautiful and Useful	" 1,000 "
" 7.	Blister Rust a menace to Western Timber	908 "

Publications -

Bulletins 2 and 4, by American Plant Pest Committee, 1918, 1919.

Status of Blister Rust Control in 1920-21.

" " " " " " 1921-22.

The White Pine Blister Rust - Farmers' Bulletin 742, 1916.

Treatment of Ornamental White Pines Infected with Blister Rust. Department Circular 177, 1921.

White Pine Blister Rust in the Western United States - Department Circular 226. 1922.

* Investigation of the White Pine Blister Rust. Perley Spaulding, Department Bulletin 957, 1922.

*Available at Government Printing Office for 20 cents.

(Publications Cont'd.)

How to Save Your White Pine Crop (Colored leaflet - Jack Frost)

Saving The White Pine - How Science Overcomes the Blister Rust. American Review of Reviews, April 1924.

Report of the Proceedings and Recommendations of the Eighth Annual Blister Rust Conference, Boston, February 1923. Mimeographed - 126 pages.

Report of the Proceedings and Recommendations of the Ninth Annual Blister Rust Conference, Boston, February 1924. Mimeographed - 126 pages.

EXTENSION WORK

Methods and Results of Cooperative Extension Work. Department Circular 316, May 1924, by H.W. Hochbaum.

Extension in Farm Forestry in New York State. Mimeographed article by G.H. Collingwood, February 23, 1923.

Methods of Building and Advancing Community Extension Programs. Mimeographed article by H.W. Gilvertson and Grace E. Frysinger, January 5, 1923.

R I B E S

Keys - Mimeographed and illustrated line drawings of each species.

The Ribes of the Inland Empire, S.N. Wyckoff - 18 pages.

Ribes of Oregon - L.N. Goodding - 30 pages.

The Ribes of Sugar Pine and Western White Pine of California. S.N. Wyckoff, May 1923. 14 pages.

The Ribes of Washington - S.N. Wyckoff. 37 pages.

Diseases

Rust Occurring on Ribes in the West - By Ellsworth Bethel.
- - This article is a part of the four preceding booklets under Keys.

Substitutes

Substitutes for Currants and Gooseberries. Mimeographed 3 pgs. by George M. Darrow - February 6, 1923.

Edible Fruits Borne on Many Ornamental Shrubs. E.M. Brockway 1924.

WHITE PINE

Diseases

The White Pine Blight - Letter from Dr. Haven Metcalf, March 9, 1922, Amended March 1, 1923. 5 pgs. Mimeographed.

Less Serious Diseases of White Pine - Dr. Haven Metcalf, June 1924. Mimeographed - 3 pages.

Insects

White Pine Insects. H.B. Pierson, January 29, 1923. Mimeographed - 3 pages.

Insects Injurious to White Pine - William Middleton, June 1924, Mimeographed - 4 pages.

Management

The Management of Second Growth White Pine in Central New England - R.T. Fisher and E.I. Terry. April 1920. Mimeographed - 7 pages.

Silviculture

The Relation of Gray Birch to the Regeneration of White Pine, By J.W. Toumey - January 1919. Mimeographed 9 pgs.

Notes on Release of White Pine in Harvard Forest, Petersham, Massachusetts. -J. Nelson Spaeth, Feb. 1922. Mimeographed - 4 pages.

Values

Value of White Pine in New England - Table showing values of white pine per thousand board feet and per acre for pine of ages from 20 to 70 years. E.H. Frothingham, 1924. Mimeographed - 1 page.

Massachusetts Considers The Planting of White Pine A Good Business Proposition. H.A. Reynolds - Mimeographed - 1 page.

Yields

Yield table for White Pine in Southern New Hampshire. J.H. Foster. 1923. Mimeographed sheet.

M I S C E L L A N E O U S.

Helpful Hints In News Writings - Webb Publishing Co.

Migrations of the Lumber Industry in the United States, By Cloice R. Howd. (Extracts from Bulletin #349, Bureau of Labor Statistics - 1923)



BLISTER RUST

NEWS



NOV 15 1924

U.S. DEPARTMENT of AGRICULTURE

Office of Blister Rust Control.

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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Plant Industry
Washington, D. C.

T H E B L I S T E R R U S T N E W S

Issued by the Office of Blister Rust Control,
and the Cooperating States.

Vol. 8, No. 9.

November 15, 1924.

Hello Agent!

Now that you have handed out to the pine farmers a little instruction along the line of blister rust protection and care of the white pine, how about loading up yourself this winter with a short course on writing for the country paper. I bet it wouldn't hurt a one of you. See the Offer of the Ohio State University on another page of this issue.

Friend Russell of the Press Service got off something good tother day. He said get your story all writ up about the blister rust and how ye protected John Jones' pines. Tell what Mr. Jones thinks about the fine work you did, then put it into Jones' words; give him the credit. Stay in the background, especially if Farmer Jones is a man whose word carries weight.

Wasn't that fine about our boys appearing in the Movies? Too bad there wasn't room for us all to be in the films. Maybe when we see "The Pines" we'll be glad we stayed out - and then again, mebbe not.

Yours to the last root,

Rilee Bill

STATE LEADERS' CONFERENCE HELD AT LITTLETON, N.H.

At the Second Annual State Leaders' Meeting held at Littleton, New Hampshire, October 13 and 14, topics of importance, such as: best methods in blister rust control, scouting, demonstrations, exhibits, etc., were discussed.

First Day - October 13

The Waterford Infection area, and other diseased areas just outside of Littleton where up to 50% of the trees had been attacked by the rust were visited. The opinion of the party, as regards the management of the Waterford Infection area, was to cut the old timber, eradicate Ribes on the pine areas (estimated cost about 30 to 40¢ per acre) and filling the open spaces by planting.

In the afternoon educational material, such as tags, signs for roadside demonstrations, etc., were discussed. Limiting roadside tagging and posting was favored -- a few areas well tagged thought best. Mr. Amadon recommended using wire to fasten the tags, as it is more permanent and will keep the face of the tags outward.

It was agreed that the value of blister rust exhibits at fairs, could not be over-estimated. Mr. Filler spoke on better exhibits, better tagging of material, and better planning of set-up, emphasizing the importance of simplicity and clearness.

It has been shown by field tests that effective personal interview work can be done practically every day throughout the winter. Pine owners are glad to have someone visit them during the winter season and are willing to listen to the blister rust control agent.

The blister rust control agents winter plan of work should include exhibits in post offices and local stores, articles for local papers, exhibiting motion pictures, talks before various meetings, and blister rust control work with Boy Scouts and high school classes. With these and other suggestions obtainable from the state leader, the agents should plan their work and time so as to get the largest returns in blister rust control work.

At the evening session the program for the Annual Conference was the main subject. Those present favored holding the Conference at Washington, D.C., the program to be left to Mr. Filler and the Washington Office to prepare. Contact was desired with those conducting blister rust control and similar work in Washington with talks by those in charge rather than discussions of the details of field work.

Blister rust short courses at college was another subject discussed, such as short courses in Vermont and in Maine for farmers (Farmers' Institutes).

Second Day, October 14

Entire party visited the headquarters of the White Mountain National Forest, at Gorham, New Hampshire, where Mr. Ira T. Yarnell, Forest Supervisor, discussed the work on the White Mountain National Forest.

Mr. Black, formerly employed on blister rust control work in Massachusetts, gave a summary of the control work done during the past season on the forest. Eradication of Ribes was completed in the Swift River Valley and work was laid out for next year. Skunk currants were found most numerous, gooseberries next, and triste and lacustre last. In the afternoon the paper mills at Berlin, N.H., were visited. This ended the meeting and those who were in attendance, including Messrs. Frost, Newman, Martin, Corliss, Ross, Hale, Tripp, Filler, Endersbee, Callward, Tucker, Yarnell, Black, Amadon, and Fivaz, left to take up their other duties.

PERSUASIVE METHODS SECURE REMOVAL OF CULTIVATED RIBES.

"The problem in Windham and Tolland Counties, Connecticut, is not so much the eradication of wild ribes, as to succeed in removing cultivated currant and gooseberry bushes. With the exception of escaped currants and gooseberries, there are few wild ribes.

Most of the country population in this locality are interested in the protection of white pine, either directly as owners, or indirectly as users. Both of these groups are alive to the need for growing something to replace chestnut, the loss of which through the blight, or bark disease, is keenly felt in this locality.

Pine owners when informed that they have infected currants on their premises are almost certain to cooperate with the blister rust control agent in the destruction of the bushes. Also, this class is willing to remove currants and gooseberries before the disease appears, and in this connection it may be well to state that in my district the blister rust occurs as spot infections. It has not become the serious menace to pine growing that it is in other sections and we wish to keep ahead of it by using means of prevention.

The second class of landowners probably have no pine, but are interested as users, and also from a general interest in the welfare of the rural community. It is fairly easy to persuade them to remove their currants and gooseberries.

There is a class who may or may not own pine (generally do not) who prefer currant jelly and gooseberry wine. If their infected Ribes are harmful the bushes can be removed under the provisions of the state blister rust law.

I do not wish to give the impression that I am getting cultivated Ribes removed in large numbers, but to show that the average rural land-owner has the right attitude of mind, and can be moved to action if properly approached and persistently followed up."

Herbert J. Miles,
Putnam, Connecticut.

- - - - -

POLISH FORESTER LIKES WAY NEW YORK PROTECTS FORESTS FROM TREE DISEASES.

The New York Times of November 18 states that Professor T. Rafalski, who is in charge of the forestry department of one of the universities of Poland, has been making an inspection tour of the Adirondacks with W.G. Howard of the Conservation Commission, assistant superintendent of State forests, for the purpose of studying New York State's methods of forest protection work. Professor Rafalski expressed himself as very much impressed with the measures taken to protect New York's forests from fire and tree diseases, particularly the fire observation station system. He said that Poland had no large nurseries like the one at Saratoga, but that each forest or forest district had a small one of its own located within a comparatively small area where planting is to be done and where only sufficient trees were raised to take care of the planting of that area.

Edit. - Blister Rust Control undoubtedly comes in for its share of commendation.

- - - - -

Mr. Herbert J. Miles, of Putnam, Connecticut, recently gave a talk on Blister Rust and Forestry, to the Campfire Girls at Brooklyn, Connecticut. Some of these girls are daughters of pine owners and will help blister rust control work by taking home information to their parents.

MR. F. M. RUSSELL DISCUSSES BEST METHODS

OF "TELLING THE WORLD".

At a meeting held in Washington, D.C., November 5, Mr. F.M. Russell, in charge of the Press Service of the Department of Agriculture spoke on "How to Reach the Farmer Reader".

Particular emphasis was placed on the work which the Department's Extension Service is doing. Mr. Russell discussed the success, also the failures, of this Service in its efforts to reach the farmer reader. Much stress was placed on the fact that farmers, as a rule, are not interested, from a news standpoint, in scientific articles from Agricultural Departments and Colleges. They are, however, greatly interested in demonstrations and practical experiments. They are curious to know how Farmer Jones, whose conditions and possibilities are similar to their own, is managing his farm. Mr. Russell said: "Information from farmer to farmer has a stronger appeal than scientific facts from universities".

"Much reliable information, of course, originates in Agricultural Departments and Universities," said Mr. Russell, "and it is of the utmost value when accepted by the farmers. The most successful way of presenting this information is to have the farmer himself in the foreground and use a simple and popular style of expression." That the human, or the personal element is an essential, was explained and proven by Mr. Russell, in his advice to contributors to farm papers.

An opportunity was given at the close of the meeting for those in attendance to ask questions, or make suggestions, pertaining to different problems and situations to be met by those writing on agricultural subjects.

These were answered by Mr. Russell who has a wide experience and practical knowledge gained by field contact with the farmers in making "first-hand" investigations.

SUMMARY OF HELPFUL HINTS GIVEN BY MR. RUSSELL.

1. Don't try to cover too big a field in newspaper articles.
2. Dry statistics, as to crops, etc., are not the most valuable news for farmers.
3. Farmers want practical demonstrations.
4. Farmers are more interested in how recommendations are put into practice than in being told why.
5. Newspaper articles must meet with approval of editors -- if not accepted they can never reach the farmer.
6. If farmers are in the foreground an article is more likely to meet with approval of editor.
7. Do not use too much "scientific stuff" -- talk in "farmers style", to some extent.
8. Reproduce the names of more people and fewer institutions -- personal names attract attention.
9. To be successful, center the general truth around an individual.

N. Schnell.

Farmer: What ye doin' round here young feller?

Agent: I'm looking for White Pine Blister Rust.

Farmer: Thet so, where did ye lose it?

SECURING INTEREST AND COOPERATION OF CHILDREN IN THE COMMUNITY.

One of the most interesting phases of our educational work is securing the cooperation of the children of the community. They will be the citizens and voters a few years hence. Interest stimulated now through proper methods will make for better conditions in the future. Their influence with their parents should not be under-estimated. A parent who will not or who does not have the opportunity to attend meetings may be reached oftentimes through the children.

The simplest and most often used method of reaching the children is through the schools. Permission to speak at the schools may be readily obtained from the superintendents of the different districts and then through the teachers themselves. Schools where botany is taught and Agricultural High Schools afford the best opportunities. Graded schools may be reached by different means.

At one graded school in a small town there was a group of white pine planted in the school yard. One of the pines had a limb infected with blister rust. The blister rust control agent stopped when the children were at recess and obtained permission of the teacher to explain and show the disease to them. They were quite impressed and some of them will undoubtedly know the disease well enough to tell their parents about it.

Small groups may be reached through the Agricultural Club Agents. Trips can be arranged and the children interested in white pine. Boy Scouts where there is a patrol affords a means of getting the boys out on hikes and incidently showing them Ribes, white pine, and the rust.

To be known and recognized by the children and students of the different communities goes a long way toward interesting the parents and gaining their confidence.

S.H. Boomer
New Hampshire.

THE YOUNGSTERS OF TODAY ARE THE
PINE OWNERS OF TOMORROW.

If the cooperation of the men and women of the community was as readily and earnestly given as that of the children, Blister Rust Control Work would be vastly simpler. My work with the children has been mostly through the "Y" Boys, Boy Scouts and Girl Scouts, and I find that one has only to show a little interest in their activities and their cooperation may be had for the asking. This was shown at a series of meetings which were arranged by the County "Y" Secretary. Two hours out of doors with instructions in Blister Rust, followed by a ten-minute snow ball fight, have proven much more beneficial than a much longer time spent indoors, explaining and illustrating the same subject.

One particular group of County "Y" Boys were unusually bright and very much interested. The first afternoon with them was spent explaining the disease and exhibiting specimens. Upon request, another afternoon was given them at which time they asked to see how much Blister Rust they could locate and identify. Accordingly, they were taken to a lot that I knew had a good many infections. Each boy was given a number and fifteen trees marked with each number, some of the trees being infected with Blister Rust, some dying from other causes and some entirely healthy. As they found Blister Rust they reported and on checking over the whole area, I found that they had identified eighty per cent of the infections.

Meetings are to be planned this year with moving pictures of the different stages of Blister Rust and the value and uses of White Pine.

F. J. Baker,

New Hampshire.

RE-ERADICATION OF RIBES.

"I've examined several eradicated areas this fall where pine owners have inquired about re-eradication on their property. Some of these areas originally had many Ribes with a bad bit of infection, when they were eradicated in 1921. Out of a dozen such areas I found one where re-eradication should take place in 1925. The estimated cost of re-eradication is about 1/4 the original cost. This area will need re-working in 1925 because it was originally worked by an inexperienced foreman and crew. The work was done in September when about one half the Ribes leaves had dropped and consequently the control work was not as thorough as on the other areas."

THE PERSONAL EQUATION.

In 1923 I visited a pine owner to secure his cooperation to the estimated amount of \$20.00. He sort of slept through the half hour while I explained blister rust and its behavior until I hit the English Cultivated Black Currant and told him that infection could be found on that species of Ribes wherever it might be in the District. He asked me to ride with him to his garden in the center of Brattleboro, and prove the statement, while he held that his Cultivated Black Currants were in the best of condition and never had blister rust. Upon examination we found them heavily infected with blister rust which caused him to be quite upset; that is the only reason I can think of for his failure to cooperate and protect his young pine reproduction by eradicating wild Ribes. He would not have the cultivated ones removed. Last winter he sold the village property. One night in May I had my Auto Exhibit parked on the street and this new owner of the Cultivated Black Currants listened to my arguments against the different

kinds of ribes growing in the vicinity of white pine. He invited me to come to his garden and remove the Ribes at my pleasure. I thanked him and called to remove them within two weeks. I found that he couldn't wait that long, but had already removed and burned them. This simply shows what a large part a little personal feeling plays either for or against the progress of our work."

S. V. Holden,

Brattleboro, Vermont.

A NEW TYPE OF MIMEOGRAPHED MATERIAL OPENS UP LARGE FIELD
FOR PUBLICITY IN BLISTER RUST CONTROL.

The Thermometer poster shown on the next page was sent in by State Leader Newman, of New Hampshire. This, or a similar poster, will be used in two ways: A forestry field meeting will be held in a few days, upon the lot where the data for this poster was secured. A copy of this poster will be enclosed with letters announcing the meeting. The other use to be made of this idea is to prepare posters for each infection area found in any new town, and send them to all pine owners in these towns.

The manufacture of a relatively new type of mimeographed poster opens up a tremendous field for getting out illustrated mimeograph copy at a very slight expense.

THIS THERMOMETER REGISTERS

Blister Rust INFECTION - TEMPERATURE

in a pine lot in

PITTSFIELD, N. H.

* * * *

CURRENT and GOOSEBERRY BUSHES

RAISE THE Blister Rust TEMPERATURE

In White Pine Lots

* * * *

DESTROYING CURRENT and GOOSEBERRY BUSHES PREVENTS

The Temperature From Rising

* * * *

A HIGH TEMPERATURE means:-

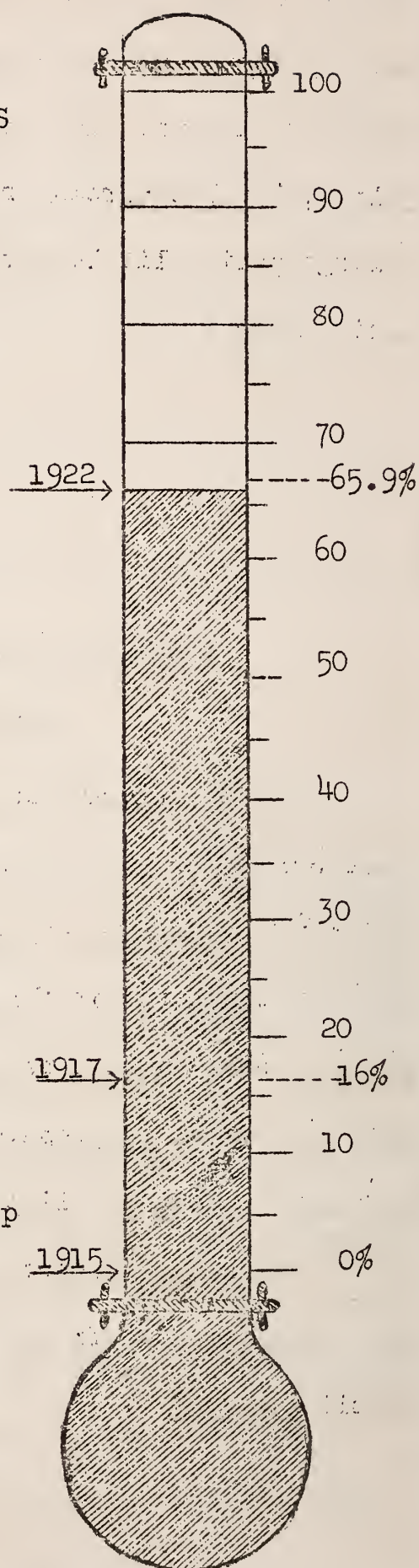
GREAT LOSS of Pine Growth

A LOW TEMPERATURE means:-

PROTECTION To This Valuable Crop

* * * *

HELP KEEP THE TEMPERATURE DOWN !



UP-TO-DATE BUSINESS METHOD USED IN SECURING LOCAL COOPERATION

If it is good practice for successful mercantile houses to send out letters announcing the coming of their commercial representatives, why not send out letters announcing the coming of the blister rust control agent?

This idea appealed to one of the Massachusetts blister rust agents, who tried it out with encouraging results.

The letter was of the usual commercial type rearranged to fit blister rust conditions, a sample of which follows.

W.T. Roop, Massachusetts.

COOPERATIVE LETTERHEAD.

Mr. -----

Mr. -----

Selectmen,
Andover, Mass.

Gentlemen:

The White Pine Blister Rust, a deceptive and destructive forest disease, menaces the white pine of this State, and is especially prevalent in Essex County.

In an effort to control this disease, the State and Federal Departments of Agriculture are cooperating with town officials and pine owners throughout the State and limited funds are now available for assisting farmers and estate owners to save their pines.

Intensive work has been carried on in Essex County since May 1, 1922, and the pines of all cooperating owners have been protected in twenty-one towns. All control work in the County must be finished by October 1, 1925. Your town is listed for cooperative control work the coming season.

Our representative, Mr. -----, in charge of the work in Essex County, will call on you soon and you are respectfully urged to assist him in every way possible, in getting the information about this disease and its control before the public, organizing local pine owners, for control work, furnishing addresses of non-resident owners, and to otherwise aid in any way you may find convenient in securing for your town its share of the State and Federal assistance available for the work this year.

Respectfully yours,

(Signed) -----Agent

DIFFERENT TYPES OF COOPERATORS.

Ascertaining from the town tax-list that one Jim ----- had some 500 acres of land bearing about 1,000,000 feet of white pine, we rolled up to Jim's dooryard one morning to make an appointment with him to look over his land for Ribes. The following conversation ensued:-

"Good morning, Mr. ----, I am in charge of the cooperative white pine blister-rust control work in this district for the State & Federal Departments of Agriculture. We came over this morning to see when you could look over your pine lot with us, show us the boundaries of your farm, and help to clean up the currants and gooseberries." (Mr. ----- was fully acquainted with the disease and its control.)

"Well, I'm busy as ----, Why do you need me to go over the land? 'It's all fenced in; you can't get off it."

"The idea is this, Mr. -----, The state furnishes our services to you as a pine owner ---- "

"-----, I ain't got but a little pine here and there, scattering stuff."

"You have young pine coming up on much of your land, and as our services are furnished to you free of charge, we expect you to cooperate to the extent of going out with us and helping to protect your pine."

"Well, how much you going to pay me for showing you the pines?!"

"Pay you! How do you get that way? Do you expect to be paid for hoeing your own corn? The same rule applies in regard to your pine crop. You are protecting it for your own benefit."

"Well, I'm busy. I can't be hiking all over this ---- farm looking for something that ain't there."

"So are we busy, and as for pay, we pay you in protected pine, free from further blister-rust damage."

"Well, I can't go today, anyway."

"We didn't expect you to. Can you go out next Monday?"

"Yes, might as well, I 'spose."

"Very well, Mr. -----. We will be here next Monday morning."

Yes, he went out with us, unpaid.

In the course of a scouting trip through the village of -----, Massachusetts, we found four cultivated red currants in the yard of one Mr. -----, They were once cultivated bushes, but now the worms had eaten off all the leaves, and what few currants they bore were shrivelled from drought. Upon interviewing the owner, and explaining to him the necessity of getting rid of these currants to protect nearby pine from blister-rust, the following conversation took place:

"Well, pay for 'em and you can have 'em!"

"The idea is this, Mr. ----, We are asking you to do no more than we are asking of your neighbors."

"Pay for 'em and you can have 'em. I can't talk to you about it."

"Surely, Mr. ----, you do not want the name of being the only person in this town that is asking compensation."

"It's all bunk. If the state would take the money it pays you fellas and use it to plant white pine, it would do some good."

"Good Heavens, man! What's the use of planting white pine if you do not remove the currants and gooseberries? Blister rust will kill it."

"I don't believe in blister-rust. I ain't seen no blister-rust, and I know a ----- of a lot more about pine than you do."

"Look here, Mr. -----, Will you go out with us tomorrow morning if we furnish the car? We will show you any quantity of blister rust not two miles from here."

"No, I won't! But you can't take those bushes unless you pay for them. You ain't got the authority to come on my land, anyhow!"

Further explanations were cut short by the sudden and portentous arrival of Mrs. -----.

"Look here you! What do you mean by tormenting my husband? You get right out of here! You have no right to talk to my husband that way, he has heart trouble. Why don't you find out what you are doing?"

"My dear Madam, please be sensible. How do I know your family history?"

"Well, everybody in town knows he is sick." (The sick man was vigorously using an axe as we came in)

"I'm sorry, Madam, but we have had no time to listen to town gossip. Why didn't your husband tell us to talk to you?"

"He doesn't have to. Now you get along!"

"Very well, we will. But we must take those currant bushes." And we did, under threat of dire consequences, which have not materialized and never will.

Another and more pleasing type of cooperator is illustrated by the following incident.

In this same Massachusetts village, indeed nearly across the street from the tormented husband, was a neighbor. On his farm were 175 fine red currants, yielding 150-200 quarts of berries annually. This man had no pine but was a public-spirited citizen. Being informed early in the season of the menace of blister rust in the town, he willingly agreed to have the bushes removed immediately if they were infected. The uredinial stage was present, but in view of his willing cooperation, we allowed the bushes to remain until he had gathered this year's crop of 140 quarts. Then we went down and with his

help removed the bushes. When we were through, he asked: -

"How much do I owe you gentlemen for your labor?"

We assured him that our services were free, and thanked him for his fine spirit and cooperation, which proved a great benefit to the entire town.

R.E. Wheeler,

Springfield, Mass.

NEW METHODS OF STIMULATING PUBLIC INTEREST IN B.R. CONTROL

I have been using a method of stimulating interest in towns which is possibly new, and which seems to be producing the desired results.

Two kinds of posters are used in this campaign besides the regular B.R. poster. They are printed in flaring red ink, and bear the caption "There is Blister Rust in this Lot", or "Here it is-Blister Rust".

We work the roads of a new town; looking over all the white pine lots for blister rust. If the rust is found in any lot; up go the posters. The latter poster is used on specimen trees on the roadside.

By the time we have these posters scattered all over a town the people are supposed to have begun to wonder and think about blister rust. Working along the roads in this way gives an Agent many chances to get into a natural conversation with passers-by, and discuss blister rust, and then again many people find out in some way what the Agent is doing, and voluntarily stop to inquire if you are "finding much".

No one with whom I have yet come in contact has shown any displeasure over the fact that his lot was posted as being infected with blister rust, and I have seen no places where these posters have been destroyed. This fact has been a source of relief, for I did not know but that the placing of the posters might arouse a feeling of resentment instead of arousing interest and a feeling that something should be done.

Errol E. Tarbox,

York County, Maine

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SMALL DETAILS BRING LARGE RETURNS

Recently while securing local cooperation in the town of Weathersfield, Vermont, the blister rust control agent made an inspection of a pine area consisting of some fifty acres, of which twenty-five acres were covered with a fairly good stand of young pine, the remainder being pasture with some scrub pine and a cut over area at one end. There were plenty of Ribes and some pine infections in the lot.

During the course of the inspection he took notice of the area that had been cut over the previous winter and observed that the majority of the trees cut were mature pines and that the tops had been cut into cord wood and piled. Upon interviewing the owner, it was found that he was not an enthusiastic prospect, but talked of cutting his pines for the pasture and said they were of no value. However, he was willing to go over the lot to see what the conditions were. In the course of the inspection the agent pointed out numerous Ribes bushes to him and each bush was promptly pulled by the owner, even though he had said that his pines were of no value and he intended cutting them for the pasture. He also destroyed each branch infection pointed out to him, and on one occasion became indignant when he discovered that someone had hacked into several small trees.

When the inspection was finished the men returned to the house and talked on many subjects other than blister rust and it seemed that topic would never be resumed. The agent, however, was far from being discouraged because he knew from the following facts that the owner did value his pines: He did not cut his trees until they were mature; he believed in blister rust because he destroyed each Ribes bush that was shown to him, as well as cutting off branch infections. When the subject of blister rust was resumed, it was but a short time until the owner agreed to cooperate, and signed a contract to that effect.

The agent believes that in the majority of cases that by observing small details, and taking advantage of them, our work will be more successful.

F. H. Rose, Vermont

A N A P P E A L T O S P O R T S M E N .

When, on October 1, the hunting season for partridge opened and a host of hunters took to the pine and spruce thickets to enjoy themselves; a special appeal was made for the support of these men in the control of the blister rust, as they, more than the rest of the public, use and enjoy the woods.

With this in mind, a placard was prepared which read: -

"HUNTERS ATTENTION."

The White pine Blister Rust is destroying unprotected pine in this vicinity. This pine makes excellent game cover and its loss means a blow to our game birds and animals.

This applies to you directly and is to your own interest as a sportsman to lend your support in the control of this destructive disease.

Currants and gooseberries are carriers of the disease and if the pine is to be saved they must be removed from pine bearing lands and for 600* feet around them.

If you own pine, A.C.T !

Apply to your local Blister Rust Agent for inspection of your pines and help in the control of the disease."

This sign was placed in a window of the largest dealers in sporting goods in town. In addition to infected pine branches, photographs, and posters, there was a plentiful scattering of guns, ammunition, mounted birds and animals.

Since using this display, I have, in interviewing prospective cooperators, found that it started a number who had seen it to thinking and after speaking to hunters met in woods and in town, I feel it has brought considerable moral support to the cause from non-pine owners.

W.E. Bradder - Vermont

*Edit. Ribes should be generally be removed for 900 feet from white pines.

TOURISTS CARRYING PINES LIKELY TO SPREAD
BLISTER RUST TO NEW TERRITORY.

One serious problem in Wisconsin is the fact that tourists and others carry hundreds of bundles of trees in automobiles. Some of these are caught by game wardens and inspectors before they reach their destination, but evidently most of them are planted in southern Wisconsin and in other states. In three days while at Shawano and Keshena I intercepted four autos with trees and destroyed those trees. I saw others but could not get them. People tell me that cars everywhere carry trees. Personally I do not see how this nuisance can be stopped by law. We cannot stop all the autos, nor can we stop cars unless the trees are in sight. On this account it seems that we must keep the white pine blister rust under control where the disease exists and in that way make the danger of carrying diseased stock as small as possible. More control work and more education is necessary.

J.H. Ninman - Wisconsin.

COURT DISMISSES CHARGES AGAINST BLISTER RUST WORKERS.

Robert W. Merrick, blister rust control agent, and an assistant, Wm. Clave, appeared before the District Court of Fitchburg, Mass., Sept. 26, charged with trespassing on the farm of Ralph N. Brown, where they had destroyed over 200 currant bushes. The Court found the defendants not guilty, since their action in destroying these bushes, was justified by the statutes under which blister rust control work is done.

Moral! "Keep within the law", or as Merrick would say, the "hoosgow" will get you.

PROBLEMS OF A BLISTER RUST AGENT.

I believe that in common with all other agents one of the hardest problems that we have to solve is that of cultivated bushes. With the men owning a few bushes it is not a matter of very great concern but when we have to deal with a woman owning either one or a hundred currant or gooseberry bushes our problem, or rather problems, develop. Perhaps if we could find an answer to the question WHY? general enough to cover all cases we would find our problem solved but then, no doubt, some other word would take its place.

I have in mind an interview with a Mrs. L. in the northern part of the county who had been criticizing the work of the Ribes eradication crew in that town. After introducing myself and stating my errand, Mrs. L. asked: "Why did they pull up my bushes and not my neighbors' across the road?"

"Because the money appropriated by the town was not enough to carry the work that far."

Mrs. L - "Why?"

"Why what?"

Mrs. L - "Why wasn't it enough? Last year Mrs. B. got paid for the currants that she lost and why can't I?"

"Well, we --

Mrs. L. - "I think that the men loafed on the job anyway. They never did anything around here."

"I am sorry that you think so but they destroyed over twenty-five hundred wild and cultivated bushes during the day that they worked in this section."

Mrs. L - "Then why didn't they destroy those currant bushes across the road? How do you know they did?"

"Did what?"

After talking in circles for about fifteen minutes, Mrs. L. did grudgingly admit that the men were not loafers but I am sure that she does not yet understand why we did not destroy "Those bushes across the road." I was told that I had my gloves on and off five times during the interview.

I have cited the above instance merely for the sake of discussion and hope that in a later issue of the News someone will tell how they have successfully combatted the "Rambling-Why" complex.

Another problem! Meetings. How can more people be induced to attend?

I have held meetings where there have been but three in attendance. I have spent the entire day before the meeting calling upon farmers and woodlot owners urging them to attend the meeting having previously put up posters in stores and other advantageous places announcing the meeting. In one town the Central Telephone Office called every subscriber to the phone and announced a meeting to be held a week later. In the morning before the meeting the operator again made the announcement; this was supplemented by posters and personal calls by myself and the result was an attendance of eight, in the best pine town in the county.

Things look more promising for our meetings this winter as the County Agricultural Agent has agreed to include two Blister Rust reels or one Blister Rust and one general Forestry reel in his motion picture meetings to be held in every town in the county. If we could include a cooking demonstration by the Home Demonstration agent we would be assured of a large attendance.

The boys' clubs have taken up a forestry project and whenever clubs have been organized I have made it a point to accompany the club-agent and to give a short talk about blister rust and its control. The interest taken by the youngsters has been remarkable and I believe that they can reach the parents in some

cases where it would not be possible for us to do so.

H.W. Robb

Edit. - Let's hear from other Agents on how they handle similar interviews and meetings.

Mr. C.C.Perry, state leader for Massachusetts, in a recent letter to Mr. Filler included the following stimulating paragraph:

"The conference of the field men was, in my opinion, the best one we have ever held in this state. The men all participated very freely in the discussion of our problems here in this state and many suggestions were made for the general improvement and standardization of the work. Each man has already submitted to me a report of the work in his district and also a plan of work for the winter. These plans of work were not satisfactory and have been returned to the agents. They will be re-written in accordance with an outline prepared by me and in conformity with suggestions made at the conference. A request was made that conferences be held more frequently and this request will be complied within so far as the work and plans of the State Leader will permit. I feel that I should also say that there is a strong feeling that the men should receive more assistance from the State Leader and the Federal Office in the conduct of scouting and educational work in general. I fail to see how I can possibly give them any more of the time at my disposal. I wish to thank you again for meeting with us and I am sure that we will all strive to be on the right side of that average line in the future."

Edit. - This paragraph is quoted in the News because it is a pithy statement, which mentions several points that have a direct bearing on the cooperative control work. I am sure we will all profit by thinking over the points made by Mr. Perry and some of them may be of value to others.

WHITE PINE BLISTER RUST IN THE
PACIFIC NORTHWEST.

"The discovery of white pine blister rust in the Pacific Northwest in 1921 added another problem of vital importance to the protection of the Idaho forests. The rapid spread of this disease in the West indicates that it will inevitably reach this state. Unless it is controlled, Idaho white pine, a timber tree of major importance to the lumber industry of Idaho, will suffer incalculable damage.

Blister rust can spread long distances from infected pines to currants or gooseberries, particularly to the cultivated black currant, but only a short distance from infected currants or gooseberries to pines.

Our present knowledge indicates that four different wild currants and gooseberries occur over quite large areas of the white pine belt of Idaho. These are the wild black currant, which grows in great mats along the streams; the prickly currant, which grows along the streams and in moist places on the hillsides; the sticky currant, which often grows on burns; and the white-stemmed gooseberry, which grows in the willow-alder flats. Observations show that all of these species are susceptible to blister rust, and are capable of causing considerable damage to white pine.

The emergency program consists of the eradication of the cultivated black currant, and the enforcement of State and Federal blister rust quarantines.

The presence of cultivated black currants in the West constitutes the greatest single menace in the rapid spread of blister rust. This currant is often, and very properly, spoken of as the nurse plant of blister rust. It

is far more susceptible to the disease than any other kind of currant or gooseberry, wild or cultivated. It is this currant which contracts the disease at great distances from infected pines. By this means it is the agent most responsible for the rapid spread of the rust.

Since the inception of the western blister rust program, nearly 7700 plantings of cultivated black currants have been eradicated in the West. The number of plants eradicated is over 118,000. In Idaho alone, over 750 plantings, representing nearly 5,000 bushes have been removed.

The States of Idaho and Oregon have passed definite legislation, making it unlawful to possess, propagate, or sell cultivated black currants.

Quarantine enforcement is a vital part of the emergency program. State and Federal quarantine officials are actively cooperating to prevent shipment of currants, gooseberries, or white pines out of the infected regions. The shipment of a single diseased plant into uninfected territory might well result in a tremendous advance in the area of infection, and consequent damage to white pine timber."

* * * * *

Extracts from The Forestry Bulletin,
of the School of Forestry, University
of Idaho. October 1924.

WESTERN WHITE PINE BLISTER RUST CONFERENCE.

The annual meeting will be held at the Chamber of Commerce, Artie Building, Seattle, Washington, December 1. Among the speakers on the program are Messrs. Charles A. Park, C.S. Chapman, A.T. Davidson, W.T. Humiston, H.P. Barss, J.S. Boyce, S.B. Detwiler and S.N. Wyckoff.

A report of the conference will be given in a later number of the Blister Rust News.

BLACK CURRANT ERADICATION IN NORTHERN CALIFORNIA

IN FULL SWING.

"The major portion of the blister rust control work for the field season of 1924 consisted of the scouting for and eradication of the cultivated European black currant. This is carrying out the plan decided upon in the cooperative agreement with Director G.H. Hecke, State Department of Agriculture, the California State Board of Forestry and the Office of Blister Rust Control, U.S. Bureau of Plant Industry. Work was started in the northern part of the state. Two crews of two men each were put into the field on August 15 and continued until October 15. One man has been retained to continue the work in Humboldt County for another month or until prevented by inclement weather.

The following is a result of the season's work up to Oct. 15:

<u>County</u>	<u># Bl. Currant Plantings</u>	<u>#Bl. Currants Removed</u>
Lassen	9	45
Modoc	5	16
Shasta	6	14
Siskiyou	4	35
Trinity	2	8
Del Norte	3	12
*Humboldt	<u>13</u>	<u>210</u>
	42	340

*Not yet completed.

The above number of black currant bushes found represents the total number destroyed through voluntary action on the part of the owners. Thus it may be seen that there was a favorable attitude on the part of the owners to cooperate with the Blister Rust Office in this work. A careful inspection of these bushes revealed no signs of the rust.

Splendid cooperation was obtained from various agencies such as The State Department of Agriculture, the State Board of Forestry, the U. S.

Forest Service, and the Extension Service. The County Horticultural Commissioners gave very valuable aid to the Blister Rust force in helping to locate many of the currant plantings.

The educational work logically following the course of the currant eradication consisted of the use of exhibits at agricultural fairs, current articles in the local news papers, talks before farm bureau meetings and the showing of the blister rust motion picture film. The latter is probably one of the best means of presenting to the public, the potential menace of the blister rust to California sugar pine."

From Weekly News Letter of California Department of Agriculture. Vol. 6, No. 22, November 1, 1924.

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CORRESPONDENCE COURSE

WRITING FOR THE COMMUNITY NEWSPAPER.

The Washington Office has just received from the Ohio State University, a very instructive set of four lessons written by Russell Lord, Extension Service News Editor. The set of lessons comprises a Correspondence Course on Farm, Home, and Community News; and will be a valuable addition to the Blister Rust Agent's Library.

Application blanks for this set of four lessons will be forwarded to any Blister Rust Employee on request mailed to the Washington Office. This course will cost nothing but study.

BLISTER RUST CONDITIONS IN CANADA.

The following report on the situation in Canada seemed so valuable, and so timely since it bears on our own control work in the West, that it has been copied in full.

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Güssow, H.T. Report of the Dominion Botanist for the year 1923, Dominion of Canada, Department of Agriculture, Page 8-10, 1924.

WHITE PINE BLISTER RUST

IN EASTERN CANADA. -- As in previous years a check was kept upon the distribution and severity of rust in the several eastern provinces. In Prince Edward Island the disease was again present at Charlottetown on cultivated black currants. Very little white pine was found on the Island and none was infected. In Nova Scotia rust on Ribes was present in the same general localities as reported last year and in addition infected pines were found at River John, Weymouth, and Springfield. Infection of Ribes was found to be fairly general in the southeastern part of New Brunswick and diseased pines were observed at Fredericton and Little Shemogue. Most of the cankers both on these trees and those found in Nova Scotia were four years old. Rust seems to be firmly established in the Maritime Provinces.

In Ontario most of the work was done in Renfrew county and the District of Nipissing bordering on the Ottawa river, where rust reaches its northern limit of distribution in this province. The disease is known to have been present on Ribes in this section for at least four years but no infected pines have ever been found. In examining one of the points of infection known since 1919 -- Pembroke - this year (1923) over 1,100 young white pines growing close to diseased Ribes were carefully gone over but none were infected. In

some cases infected Ribes were growing in the shade of small pine trees and, although the latter were examined with particular care, no infections were apparent. Diseased Ribes were found in ten new localities in Renfrew and Nipissing and also at several points across the Ottawa river in Quebec.

IN BRITISH COLUMBIA. -- The work of the present season was for the most part confined to the interior of the province and consisted mainly in scouting to determine the distribution of the rust. Unfortunately, the disease was found to be widely spread.

Briefly, it may be said that in the interior white pine belt rust is present throughout the valley of the Arrow lakes; it has also been found at Nelson, on Kootenay lake. In the Dry Belt, which had been expected to prove an effective barrier to the dissemination of rust from the coast, infected Ribes were commonly found. At Merritt infection was very severe. This town is about 80 miles distant from the nearest known pine infection and 30 miles from the nearest known five-leaved pine, there being a small stand of white-barked pine (*Pinus albicaulis*) on top of mount Kanaka to the southwest.

In view of the fact of the wide distribution of rust in the interior and the lack of evidence of importation of either pine or Ribes, the possibility that the fungus had spread from the coast by means of aeciospores suggested itself. The production of aeciospores was very heavy in the coastal section during the years 1916, 1917, 1918, and the age of the pine infections found at Canoe, Revelstoke, and Beaton corresponds to this, as they mostly originated in 1917. Further evidence tending to support this view was obtained when infected cultivated black currants were found at McLachlan bay, which is about 210 miles northwest of Vancouver and about 110 miles north of the limit of white pine upon the coast. It is also about 100 miles

west of the limit of white-barked pine. The probability of the occurrence of planted five-leaved pines in this unsettled country is very slight. To account for the presence of rust in this remote locality one must either accept the hypothesis of long distance, aecial spread or else assume that the fungus has reached this point by uredinial spread and is perpetuating itself by overwintering. That this fungus can live over from one year to another under the conditions obtaining in the Eastern United States and Canada has been conclusively demonstrated, and there is no reason to suppose that such would not be the case upon the Pacific coast where conditions are, if anything, more favourable for this mode of passing the winter. As yet there is insufficient evidence to justify a conclusion as to which of these explanations is the correct one to account for the occurrence of rust so far beyond the range of five-leaved pines.

A point of interest in connection with the life-history of this fungus was noted when closed blisters were collected on March 17 near Murrayville, in the Fraser Valley. This is apparently much earlier than this stage of development has been previously observed in North America, although, according to Spaulding*, closed blisters occurred on the same date in 1918 in France. As a further illustration of how widely the life-history of rust differs under western conditions from the usual sequence of events as they occur in Eastern Canada, it may be mentioned that on October 28 a fruiting canker on a white pine was observed at Nakusp, on Upper Arrow lake.

Last year a small white-barked pine (*P. albicaulis*) growing in the arboretum of the provincial university at Point Grey was observed to be affected with rust in the swelling stage. During the past summer numerous pycnia were produced and on April 8 of this year aecia began to break through the bark of the stem, spreading up the branches of the growth of 1919.

*Spaulding, Perley. Investigations of the White-Pine Blister Rust. U.S. D. A. Bull. 957: 1-100. Fig. 1-13, pl. 1-6. 1922

As usual the provincial Forest Branch co-operated with us in carrying on our field work and valuable assistance was also given by the Air Board through the Jericho Beach Air Station at Vancouver. Certain of the Vancouver daily newspapers continued to take an interest in our work and desirable publicity was accorded it in this way.

FILMING "THE PINES"

The heartiest cooperation of citizens in New Hampshire, Maine and Vermont, was shown the Motion Picture men of the Department and our Office in filming "The Pines." Mr. Green, of the Office of Motion Pictures, directed the taking of the film. Mr. Goll, in charge of Motion Pictures for the Bureau of Plant Industry, in relating incidents in connection with taking this picture, stated that "you can't stress too much the cordial cooperation we received from private citizens throughout the trip".

Needless to say the blister rusters "did themselves proud" in the acting. "Jack" Frost, Floyd M. Callvard, Mrs. E.C. Filler, Allen M. Tucker, A.E. Fivaz, J.F. Martin, W.J. Endersbee and T.L. Kane were among the actors.

The film has been developed and shown for the first time (November 26) but the titles have not as yet been run off. The film with titles will probably be ready for editing by December 15.

Yours truly,

W. J. Endersbee

PINE NEEDLES.

Be thorough, courteous and careful.

Listen to complaints and suggestions- disregard whims.

Inform the man, who has use for Blister Rust Control.

Speak plainly- Not too fast nor too slow- When you have to hunt for words stop.

To-day is yours- Use it- To-morrow has not come- Why worry about it.

Eradicate more- Miss less.

Reason- Rather than argue.

Ruin Ribes- Protect pine.

Use diplomacy on the owner and force on the Ribes.

Secure cooperation- Promises pull no Ribes.

Tolerate rebuffs good naturedly.

Cooperation is the hinge upon which all activities swing.

Orderly work, is good work - Plus time saved.

Nonchalant pine owners will not eradicate in the future.

Teach the owner, rather than show him.

Recommend forestry generally - Not specifically.

Offhand information is detrimental to the Service and yourself.

Loquacity is not always an asset.

E. J. McNerney.

District #5, Worcester, Mass.

PINE COLLECTIONS IN NEW YORK AND MASSACHUSETTS.

- A VISIT TO THEM WOULD BE OF VALUE -

The ability to identify forest trees, and especially pines, is of inestimable value to those of us engaged in the control of the blister rust. For that reason a short list of places in New York and Massachusetts, where there are pine collections, or pinetums, will be of interest to all.

When opportunity affords, visit these places and study the pines, especially the five-needled ones. In New York State, pine collections are found at the following places:

Brooklyn Botanic Gardens, Brooklyn.
Ellwanger & Barry, Rochester.
Highland Park, Rochester.
Letchworth Park, Portageville via Olean from South
New York Botanical Gardens, New York City.

In Massachusetts, pine collections are found at:

Arnold Arboretum, Jamaica Plains.
Mr. Oakes Ames, North Easton
Mr. Nathan Matthews, Hamilton
Mr. John H. Thayer, Lancaster
Wellesley College, Wellesley

At the Arnold Arboretum, the following white pines have been growing in the last few years, though it is not positive that all species are still living today:

Pinus aristata	---	Bristle-cone pine
" cembra		Stone pine
" excelsa		Himalayan white, or Bhotan pine
" flexilis		Limber pine
" koraiensis		Korean pine
" lambertiana		Sugar pine
" monticola		Idaho white, or Western white pine.
" parviflora		Japanese white pine
" peuce		Balkan pine
" strobus		White pine

At the pinetum at Wellesley College are found:

P. armandi - Chinese white pine	P. monticola
P. cembra	P. parviflora
P. flexilis	P. pentaphylla - Jap. white pine.
P. koraiensis	P. strobus
P. lambertiana	

At the New York Botanical garden are found:

Pinus cembra
" excelsa
" parviflora
" peuce

If other species of 5-needle pine than strobus, are found infected, promptly report species, location, etc., to Washington Office and where possible send specimen.

Do you know of pine collections other than those listed above? The Editor would be glad to receive data concerning them, and the species of pines that they contain. Have these white pines collections been protected from blister rust?

R.G. Pierce, Washington, D.C.

TOWN FORESTS

Clipping from Boston Daily Globe - Sent in by E.C. Filler.

* * * * *

The State furnishes pine trees for town forests. The Massachusetts Forestry Association, which introduced town forests to Pilgrim soil, has offered to plant the first 5000 trees (five acres) for every town that sets aside 100 acres of land for forest plantings. Once established, a town may turn its forests over to the expert management of the State forester. One little town, richer in land than other resources, has already set aside 1600

acres for future tree planting. Another town has planned its forest to be the setting for a civic center. Its schools and libraries will be nestled in this communal grove. The woodlot will be made to yield its share of beauty. It will be also a bird reservation and a game sanctuary. The town forest typically is a provision for the future --- insurance for the homes and industries of those who are coming after.

The town forest can be not only a profitable community venture but quite as much a demonstration to private land-owners of how to turn their idle acres to account. Once the towns have a stake in the woodlands, more effective campaigning against fire and pests is certain.

If we learn our lesson in time the forest situation has its bright side. As civilizations grow older the complicated problems of an adult State demand a higher order of citizenship from a people who would cope with them, than the relatively plain sailing of conditions in a new country. It is fitting that the town meetings of Massachusetts Bay should be the first to accept responsible local stewardship for forest resources. Our town forests will be at least one answer to the challenge that a democracy cannot take thought for its future.

We are learning to distinguish between appropriations for administrative expenditures, which for effectiveness should be kept to the minimum, and funds for investment in our community development, which only the resources of the people should limit. The town forest represents an investment in the substance, the beauty, the pride and the competence of the future community. It is a venture that may be the model for who knows how many collective strivings for a better world in the here and now.

Uncle Dudley.

Edit. - Where town forests are being formed and white pines are being planted, arrangements are made with town officials by the local blister rust control agent for the protection of the trees from blister rust by the eradication of Ribes.

E X H I B I T S

AN ANALYSIS OF FAIR EXHIBITS

I have been reading with considerable interest the various articles on Blister Rust exhibits in the several issues of the Blister Rust News. I recently had an exhibit at the California State Fair in Sacramento and had occasion to observe the reaction of the people to various exhibits.

The curiosity and interest of the average human being is first centered in something alive and by that I mean some specimen in the animal world whether it be a flea or an elephant. To those offices or bureaus where work is closely allied with the animal world, such as for instance the U. S. Biological Survey, the battle is already half won in so far as creating public interest with their exhibits. The very nature of their work gives them this start.

The U. S. Biological Survey at the California State Fair in order to show the enormous destruction caused by rats had two cages containing the ordinary brown rat and the camp or pack rat. The terse caption, "Rats" stood out in bold letters. On either side of this the monetary damage caused by these rodents was given. I doubt if 5% of the people saw the latter. Why was it that these cages containing the common rats were surrounded most of the time by interested groups? Was it not the inherent quality of human nature to see something alive - to see something move.

The office of Predatory animals had a fine exhibit. This followed the modern trend of museums to present or show wild animals in their native haunts. A bob cat in characteristic pose amid natural surroundings was about to pounce upon a lamb. The animal feature here was the "drawing card" aside from the excellent "get up" of the display.

The U. S. Forest Service had a timely exhibit in the nature of a forest fire in action. By mechanical contrivances and colored lights, one could see the fire start, then the flames at their height, their gradual subsidence and the aftermath represented by the countless number of smoldering trees depicting a scene of desolation. This "went over" big. There was action. It would have been useless to have set up a painted forest fire on canvas.

The U. S. Bureau of Public Roads aside from its usual "sets" of the various types of road construction had a series of colored negatives showing scenic views along various highways. The aesthetic sense of the individual was appealed to in this case.

The above mentioned offices or bureaus are named in the order of the interest which each exhibit created.

The Blister Rust exhibit probably ranked along with that of the Public Roads. Posters, maps, specimens, charts and photographs comprised the exhibit. The latter were enlarged and colored, a big step ahead of the ordinary black and white pictures. These were undoubtedly the "drawing card" of this display. It is true perhaps that when the people were once before the exhibit, the other things created as much interest. Referring again to the photographs which were mostly forest types (those we have in the West at the present time) it would be well to have pictures showing quarantine inspection, black currant eradication and local control methods. Into these pictures there would be injected a personality now lacking in the stereotyped forest views. A step in advance of colored photographs would be colored negatives. A series of six or eight set in an attractive panel would create unusual interest. There is something about the lighted effect of these negatives that attracts the fair attendant's eye at some distance.

Probably one of the best exhibits that could be devised would be a replica of the blister rust in its native state. This might take the form of a miniature pine forest with living and dead trees, the latter caused by the ravages of blister rust. Interspersed among the trees could be wild Ribes with a ranch or farm house nearby possessing a row of cultivated English black currants. It might be possible to have an eradication crew in line formation, in the act of pulling up the wild Ribes. These miniature crew men could be made of clay or wood. (I had just reached this point when I received the September issue of the News in which I read that the exhibit planned for the Eastern States Exposition was constructed with those same ideas in mind).

No doubt such exhibits are expensive and require an infinite amount of time and patience to successfully make but I believe it pays in the end. It is true that only the larger fairs would warrant such exhibits. Displays at the large fairs in the West are the best means of bringing before the public the fact that there is such a thing as blister rust.

In the foregoing paragraphs I have attempted to show the successive steps towards what in my opinion would make for the best White Pine Blister Rust display.

Oct. 25, 1924

George A. Root
c/o State Department of Agriculture
Sacramento, California

P E R S O N A L S

The National Conference on Utilization of Forest Products was held in Washington, D.C., November 19 and 20. Among others who attended the conference were several men connected at one time or another with blister rust control: -

L. J. Young -- Professor of Forestry at the University of Michigan.
J. M. Briscoe -- Dean of Department of Forestry at University of Maine.
Austin F. Hawes -- State Forester of Connecticut,
Harris J. Heynolds -- Secretary, Massachusetts Forestry Association.
R. M. Ross -- Forest Commissioner of Vermont.

George A. Root, writing under date of November 2, from Eureka, Calif.

"I am at present in the field in northwestern California grubbing out black currants, and I find many of them, too." Mr. Root's address is care of State Department of Agriculture, Sacramento, California.

Mr. W.T. Roop is working ahead of schedule. Listen to this:

"You will be interested to know that we have completed work in 11 towns this year. This, together with the work finished in 1922-23, makes a total of 21 towns. The remaining towns are marked for cooperative Blister Rust Control the coming season, finishing all work in Essex County, Massachusetts, by October 1925, cutting 7 months off the original plan."

Mr. S. B. Detwiler left Washington about November 5th for an extended trip throughout the North Eastern and Lake States and is now (December 1) on the West Coast. He will probably remain in the field until the latter part of December.

Appointments

Messrs. Charles E. Baker and Ralph M. Hutchinson received appointments as Agents in New York, effective November 15.

Resignations

Recent resignations include: Messrs. Jesse P. Bascom, of California; Hans N. Hansen, of California; Stillman M. Jones, of Maine; Charles F. Lackey, of Washington; and Merrill A. Wood, of California.

Mr. Allen M. Tucker, of Massachusetts, resigned Nov. 15, to accept the position of forester with Charles H. Tenney Co. of Boston.

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RILEY AT YALE.

Mr. J. E. Riley, of Vermont, who is spending this school year at Yale has just written the Washington Office. A few extracts from this letter will be appreciated by J.E.'s friends.

"The work at the school is quite heavy as I am taking more than the customary hours, but so far I am getting along fully as well, if not better than I had anticipated. My class work includes Management, Lumbering, Regional Silviculture, Wood Using Industries, Improvements, Identification of Woods, and Forestry Abroad, besides a lecture and field course in soils and their relation to plant growth, and a half day's field work under Prof. Hawley on a special silvicultural problem. Prof. Chapman's Management course is particularly good in that it includes the principles of forest administration. Dean Graves is to give a seminar course in the principles of Administration, which I am going to attend.

* * * * *

Last week I had an opportunity to get in a few licks for blister rust as Prof. Hawley asked me to talk about the blister rust situation to his class in Regional Silviculture and we spent most of the hour discussing the subject. Several of the fellows asked for more information after class and I suggested some literature for them to read."

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Edit. Mighty glad to hear from you, Riley. -R.G.P.

PUBLICATIONS

Blister Rust.

Anonymous. Pros and Cons of Blister Rust.
Arguments For and Against Modification of Quarantine
Voiced in Washington -- Decision now in F.H.B.'s Hands.

The Florists Exchange

Volume 58, No. 14, Page 986. Oct. 1924.

Darrow, George M. and Detwiler, S.B.

Currants and gooseberries: Their Culture and Relation to
White Pine Blister Rust. Farmers Bulletin 1398, U. S. Dept.
of Agriculture, August 1924.

This is a revision of Farmers Bulletin 1024. It con-
tains an article on the blister rust on pages 18-23, and a
Summary of State Laws concerning Currants and Gooseberries
in Relation to Blister Rust Control, P. 33-36, and a Digest
of State and Federal Quarantines governing the interstate
movement of currant and gooseberry plants into each state,
P. 36-38.

Gussow, H.T. White Pine Blister Rust.

In Report of the Dominion Botanist for the year 1923, Pages
8-10, 1924, Dominion of Canada, Dept. of Agriculture.

This article has been copied in full in this issue
of the Blister Rust News.

Simmons, J.R. - Gypsy Moth, Blister Rust, and White Pine Weevil.

An Opinion on Reforestation.

The Seed Tree (Issued by New York State Forestry
Association) Vol 2 No. 4, Oct. 1924.

"We have often wondered what is responsible for the
remarkable spirit and interest manifested by the members of
the Department engaged in the eradication of blister rust in
this State. The explanation is found in the fact that these
men are fighting to save the white pine, our greatest timber
tree, -- a tree which has perhaps accounted for more of our
wealth and comfort than any other single species.

On the basis of the work that is in progress, and
that blister rust is controllable through the eradication of
currant and gooseberry bushes within a reasonable distance
of white pine stands, we have been encouraged to continue
using white pine trees in large quantities in our reforesta-
tion work. It is doubtful, however, whether extensive plant-

ings of white pine in clear stands should be undertaken by the citizens of the State without proper technical advice. For in addition to the danger of disease, there is the danger of insect attack. The white pine weevil, a very small but powerful enemy, exists as a menace to this stately tree in most sections of the State.

* * * * *

It is the writer's belief that mixed plantations of pine and spruce are better than clear plantations of any single species; and that where the area to be reforested is of any appreciable size, the owner should at least use as many kinds of coniferous forest trees as are adaptive to the location.

* * * * *

There is no tree that can adequately fill the place occupied by the white pine in the forestry of the State, but we have several very excellent coniferous trees that can be used in conjunction with the white pine."

Ribes

Thayer, Paul. The Red and White Currants. Their History, Varieties and classification. Ohio Agriculture Experiment Station (Wooster, Ohio) Bulletin No. 371. p_307-394_ -- 14 plates, June 1923.

Edit: This is the most comprehensive study of these currants made in America in recent years.

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Farmer: Whar air ye workin here abouts?

Agent: I am working for the Department of Agriculture.

Farmer: So? How fur up the road is that?

